Case 1:1	-cv-00122-LPS Document 408 Filed 09/18/18 Page 1 of 279 PageID #: 18931
1	IN THE UNITED STATES DISTRICT COURT
2	IN AND FOR THE DISTRICT OF DELAWARE
3	INTERNATIONAL BUSINESS MACHINES
4	CORPORATION, : CIVIL ACTION
5	Plaintiff, :
6	; ; ;
7	GROUPON, INC., : NO. 16-122-LPS
	Defendant.
8	
9	Wilmington, Delaware Tuesday, July 17, 2018
10	Jury Trial - Volume B
11	
12	BEFORE: HONORABLE LEONARD P. STARK, Chief Judge, and a jury
13	APPEARANCES:
14	POTTER ANDERSON & CORROON, LLP
15	BY: DAVID E. MOORE, ESQ., BINDU A. PALAPURA, ESQ., and
16	STEPHANIE E. O'BYRNE, ESQ.
17	and
	DESMARAIS, LLP
18	BY: JOHN DESMARAIS, ESQ., KARIM Z. OUSSAYEF, ESQ.,
19	LAURIE STEMPLER, ESQ., KEVIN K. McNISH, ESQ.,
20	MICHAEL MATULEWICZ-CROWLEY, ESQ.
21	ROBERT C. HARRITS, ESQ., BRIAN D. MATTY, ESQ., and
22	EDWARD GEIST, ESQ. (New York, New York)
23	Counsel for Plaintiff
23	Comiser for Franklik
25	Dale Hawkins Brian P. Gaffigan Registered Merit Reporter Registered Merit Reporter

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1	ADDEADANGEG. (Continued)
1	APPEARANCES: (Continued)
2	ASHBY & GEDDES, P.A.
3	BY: JOHN G. DAY, ESQ., and ANDREW C. MAYO, ESQ.
4	and
5	
6	FENWICK & WEST, LLP BY: J. DAVID HADDEN, ESQ.,
7	SAINA M. SHAMILOV, ESQ. PHILLIP J. HAACK, ESQ.
8	SAPNA MEHTA, ESQ. JESSICA M. KAEMPF, ESQ.,
9	ATHUL ACHARYA, ESQ., and JESSICA BENZLER, ESQ.
10	(Mountainview, California)
	Counsel for Defendants
11	
12	
13	
14	
15	
16	- 000 -
17	PROCEEDINGS
18	(REPORTER'S NOTE: The following jury trial was
19	held in open court, beginning at 8:41 a.m.)
20	THE COURT: Good morning.
21	(The attorneys respond, "Good morning, Your
22	Honor.")
23	THE COURT: Are there any issues that IBM wishes
24	to raise this morning?
25	MR. DESMARAIS: Yes. Let me go.

THE COURT: 1 Okay. 2 MR. DESMARAIS: I'll go first, Your Honor. 3 Thank you. 4 The defendants filed a motion last night 5 alleging that I transgressed on one of the MILs. didn't respond to that yet, but it is a mea culpa. 6 7 not, in the course of my opening, have the MIL in mind, so 8 I am wrong and I shouldn't have said that. It was an 9 accident, and it won't happen again. But it was done in 10 good faith and I have refreshed on all the MILs and it won't 11 happen depend. 12 THE COURT: So you agree there will be no 13 evidence or argument or evidence regarding the amount of 14 legal fees parties occurred in prosecuting or defending the 15 case. 16 MR. DESMARAIS: Yes, Your Honor. It was an 17 accident and it won't happen again. THE COURT: Is there anything further Groupon 18 19 wants on this point? MS. SHAMILOV: No, Your Honor. 20 21 THE COURT: Okay. Thank you for that. 22 Other issues from IBM? 23 MR. OUSSAYEF: Yes, Your Honor. 24 THE COURT: Good morning. 25 MR. OUSSAYEF: Good morning, Your Honor.

Oussayef for IBM. First of all, we'd like to invoke the rule unless there are any fact witnesses here from Groupon other than the corporate representative, but I just wanted to clearly invoke the rule.

THE COURT: For this discussion or ...

MR. OUSSAYEF: No, no, no. For going forward for fact witnesses or for testimony going forward in the case with the jury.

THE COURT: I assume there is no disagreement about that?

MR. HADDEN: No, Your Honor.

THE COURT: Okay.

MR. OUSSAYEF: Second of all, just a procedural issue, Your Honor. I believe during the preliminary jury instructions, Your Honor made reference to a three phase -- three phases of the case, but I believe in the pretrial order, the Court actually ordered the construction of the case would be a four phase case, typical with how things are proceeding. And I believe that was because the parties drafted the preliminary jury instructions at a time where we weren't sure how it was going to turn out. So I just wanted to make sure that -- you know, point that out to Your Honor and make sure we all know that it is kind of a four phase case.

THE COURT: Right. So my view is, up front, you

1 probably don't have to tell the jury anything further at 2 this point, but you all should be comfortable knowing I do 3 see it as a four phase case, meaning the defendant has a chance to do rebuttal on invalidity issues they have the 4 5 burden on. 6 MR. OUSSAYEF: Right. 7 THE COURT: It's three closing arguments, so the plaintiff will go first and last on closing. 8 Is that 9 consistent with your understanding? 10 MR. OUSSAYEF: Yes, Your Honor. So it would be 11 our case-in-chief, Groupon's case in chief, our rebuttal or 12 our reply on infringement and rebuttal on validity, and 13 Groupon would be able to present their reply on invalidity, 14 it's my understanding. 15 THE COURT: Right. That is my understanding. 16 And I don't think I need to explain further to the jury. 17 You are not asking me to? 18 MR. OUSSAYEF: No, Your Honor. I'm not. 19 THE COURT: All right. Let me have Groupon up 20 here, make sure we're all on the same page. 21 MS. SHAMILOV: Good morning, Your Honor. THE COURT: Good morning. 22 23 So in the pretrial order, the MS. SHAMILOV:

parties agreed to a different -- to a three phase setup.

And so then subsequent after that, you issued an order that

24

said the four phase unless the parties agreed otherwise,

1

2 which the parties had had an agreement in their pretrial 3 order. 4 THE COURT: I don't know if you had agreed 5 previously. 6 MS. SHAMILOV: So we weren't, we weren't 7 operating under that impression because we agreed that is what we were going to go with, but if Your Honor thought 8 9 that's what it meant when you said that. THE COURT: Yes. No, I meant --10 11 MS. SHAMILOV: That's fine. 12 THE COURT: Sorry. I meant to reject what you 13 had. 14 MS. SHAMILOV: We didn't understand that, Your 15 Honor. So we're now fine. 16 THE COURT: Groupon agrees there is nothing for 17 me to tell the jury at this point. 18 MR. HADDEN: I agree, Your Honor. 19 THE COURT: Okay. 20 MR. OUSSAYEF: Your Honor, just because I was a 21 little bit high level in my explanation of the phases, I just wanted to make sure that it's what the Court ordered in 22 23 D.I. 314 from 4 to 5 as opposed to kind of my high level 24 overview. 25 THE COURT: Right. That was the order that I

issued after proceeding the pretrial order before we had the pretrial conference.

MR. OUSSAYEF: Yes, Your Honor.

THE COURT: That's still where I am.

Understood?

MR. HADDEN: Yes, Your Honor.

MR. OUSSAYEF: The next point I wanted to bring up is just as a point of clarification for the dispute between the parties based on slides, that kind of thing. The procedure that has been going on recently is we have gotten a lot of objections, and we have been meeting and conferring to the wee hours of the morning. Literally folks were up all night until this morning to deal with this.

So we had objections to over 100 exhibits and slides. And now I understand the objections were really narrowed down to maybe three or four, something in the order of that. And I would just ask for clarification from Your Honor about having objections that are just narrowed to what there is a good faith basis for objecting to as opposed to kind of going through a process of three or four hours of meet and confer and e-mails back and forth through the wee hours of the morning.

THE COURT: Well, remind me if you know. I have the pretrial order here, but I haven't looked. I think you have a time in which you I were going to disclose objections

and a time in which you would meet and confer. I don't think I signed off on something that said that process had to last until 3:00 or 4:00 or later in the morning. But do you recall what time frames you all have agreed on?

MR. OUSSAYEF: Yes, Your Honor. So slides are disclosed at 7:00 p.m. and then at 9:00 p.m., objections are identified. And then at 10:00 p.m., the parties are to meet and confer.

Last night, we disclosed our slides at 7:00 p.m. We got 100 plus objections at 10:30 or 11:00 last night. We had to push back the meet and confer, and just to go through the 100 issues it took hours. And then afterwards to try to resolve and address the concerns on the slides, you know, we tried to accommodate and make changes to the slides and then, you know, we had to discuss whether that was sufficient for Groupon, back and forth. So I don't want to bore the Court with all the details.

THE COURT: No, no, no. So, first off, there is no deadline in the pretrial order for when you can legitimately stop meet and confer, right?

MR. OUSSAYEF: That's correct.

THE COURT: So one thought I have is in addition to possibly moving these times up, you know, setting a cutoff time and what you don't resolve, you know, you are going to use time to talk about in front of me the next day.

But in the light of day after, you all have had hopefully a little bit of sleep.

MR. OUSSAYEF: Yes.

THE COURT: The idea is that you have to a good faith meet and confer but the idea is that not everyone risks their entire health just to get through a trial.

MR. OUSSAYEF: Right. And I think the issue,
Your Honor, is that we're a little bit on an unsure footing
because if there is 100 objections that are not resolved the
night before, we are, it's difficult to prepare to explain
to Your Honor our position because we're not sure which of
those 100 will actually come up. So perhaps I would say if
the other party is going to not -- you know, if we don't
resolve those issues, then there should be some kind of
addressing those issues in front of Your Honor or at least
saying we affirmatively drop the issues that are still
unresolved.

THE COURT: Okay. Let me see what Groupon has to say.

MS. SHAMILOV: I don't think what counsel referred to will actually be a big problem going forward. The problem what happened now at 7:00 p.m., we got a disclosure of over 300 slides and over 200 exhibits. We're not in our home office. By the time we get the download, it's that sheer volume of information. So we gave them

notice we will be late for identification of demonstratives, objections and exhibits because of just the volume of it and how late we were. And this was the expert demonstratives and exhibits. And when we look through slides, we weren't sure exactly where the exhibit and the slides were cited and how they tie into the expert report and that was the clarification we were asking for at the meet and confer. So once we had that information.

And I don't believe any of the team members that are here were in the meet and confer. So the members of the meet and confer are getting some rest hopefully this morning. I don't expect another day with such voluminous disclosure. I don't expect this to stay an issue going forward, Your Honor.

THE COURT: Do you have any proposal for what I should do to make sure it doesn't become an issue?

MS. SHAMILOV: I'm fine. I do think we have to have a meaningful meet and confer and sort of focusing the issues and doing the follow-up to narrow the issues. I don't have the problem with raising the issues in front of you in the morning, like you suggested.

THE COURT: Does any of that help, Mr. Oussayef?

MR. OUSSAYEF: Yes, Your Honor. I think that

guidance helps to really have a good faith basis for the

individual objections. You know, I would bring up that

to the Dr. Schmidt demonstratives who will be up today because I'm concerned it will be difficult to modify slides to accommodate any objections that were made from Groupon. It's not clear what additional objections are addressed this morning or will be brought up this morning. So I would ask if we could entertain those this morning so we would have chance to make any modifications that may become necessary.

THE COURT: Okay. We will do that, but before you sit, so in your view, is there enough clarification and, you know, you all act in good faith, maybe you will be able to do well by your clients and still sleep and survive a trial or are you looking for me to modify the pretrial order somehow to help make this an earlier process?

MR. OUSSAYEF: Perhaps the way to address it, Your Honor, is if there is still unresolved issues at the end of the night or at the end of the early morning, then if the other party can say to the Court we are dropping all of these objections to just give a little bit of clarity about how many objections were made and how many were dropped as a way to kind of, you know, gently promote to the parties that if they make lots of objections without a basis, then there will be a time we'll have to actually actively explain that all of these objections are now dropped. That is the only suggestion I can make.

THE COURT: But if they're not going to drop them, then we'll talk about them in the morning.

MR. OUSSAYEF: Yes, Your Honor.

THE COURT: I mean what I think I'm more than happy to do, and it sound like might be helpful is just give you all a bed time; right? Just to say look, stop talking at midnight, you know, do your best up until midnight and then stop talking. If you want to talk again at 7:30 or 8:00 in the morning, that's fine, but show up at 8:30 and you will have satisfied your meet and confer obligation provided you acted in good faith between 6:00 p.m. and immediate night, but after that, you know, people need to try to get some rest and prepare for trial, et cetera.

MR. OUSSAYEF: Right.

THE COURT: So do you want me to say that?

MR. OUSSAYEF: Yes, Your Honor. I think that makes sense. And perhaps at midnight if the party objecting can say this is our finalized objections that we're actually going to bring up in front of the Court, that clarity would do a lot to alleviate the burden.

THE COURT: What do you think of that approach?

MS. SHAMILOV: I'm fine, Your Honor, not having anybody past midnight. I do have a slight issue with trying to narrow the objections right at midnight. I think some of the people who will be in court first thing may need to look

at them, I rather do that early in the morning. We can set a time at 8:00 a.m. if that's what we need, but obviously we will only be raising -- once our case starts only raising the objections that we need Your Honor to resolve.

THE COURT: What do you think?

MR. OUSSAYEF: Your Honor, to not know what we're going to be arguing in half an hour is difficult to be able to prepare properly so, you know, maybe we can say two part, at midnight here is a good faith of what we believe we're going to present and at 8:00 a.m. here is our finalized list.

MS. SHAMILOV: That's fine.

to be more accommodating than this. It's not like you have to argue until midnight, but if you can disclose exhibits and slides before 7:00, then you should do that. And if there is a way given that everyone is on the road you can make it easier so that people don't lose hours just trying to figure out what it is in the universe that you're looking at, you should try to help each other with that.

But in all events, you have satisfied your meet and confer obligation provided you act in good faith as long as you stop at midnight and I order you to stop by midnight and pick up again at approximately 8:00 a.m. the next morning after a healthy pause.

1	MR. OUSSAYEF: Thank you, Your Honor. I
2	appreciate the Court's indulgence dealing with these
3	administrative matters.
4	THE COURT: We will talk about Schmitz, but you
5	want to do that before we bring the jury in?
6	MR. OUSSAYEF: Yes, Your Honor.
7	THE COURT: We may come back to it. Mr. Filepp
8	is first.
9	MR. OUSSAYEF: Yes, Your Honor.
10	THE COURT: What do we expect after that?
11	MR. OUSSAYEF: After Mr. Filepp, it will be
12	Dr. Hinton.
13	THE COURT: Then do we get to Schmidt after
14	that?
15	MR. OUSSAYEF: Yes, Your Honor, then it's
16	Dr. Schmidt.
17	THE COURT: And the depositions which we may end
18	up talking about as well. Where did you hope to play those?
19	MR. OUSSAYEF: So we hoped to play them after
20	Dr. Schmidt's testimony which in all likelihood would mean
21	it would be tomorrow.
22	THE COURT: Okay. Do you have other issues you
23	wanted to raise besides the Schmidt objections which I guess
24	it would be their objections?
25	MD OUCCAVEE. I did wort to address the

deposition clips briefly, Your Honor.

THE COURT: Let me see if Groupon has issues.

That would be your universe of issues for this morning?

MR. OUSSAYEF: Yes, Your Honor, that's correct.

THE COURT: All right. Are there issues that Groupon wanted to raise?

MS. SHAMILOV: I think I only have one issue. We also have deposition related issues for later, one issue with respect to anticipated testimony of Dr. Hinton.

Dr. Hinton is an inventor on the '346 patent. She was disclosed as such in the initial disclosures and was designated as such as a 30(b)(6). Based on her exhibit disclosures and our discussions with counsel it appears that she's not also going to be testifying about the '601 patent, she never disclosed, she doesn't have any knowledge about it, she was never a 30(b)(6), so we were never given an opportunity to examine her, that's our objection that she shouldn't be allowed to talk about the '601 patent.

THE COURT: Let me hear what IBM has to say.

MR. DESMARAIS: Thank you, Your Honor. John Desmarais for IBM. She's not talking substantively about the '601 patent, she knows the patent, she knows the inventors, we were going to show it to her, say Iyengar invented this, it's IBM patents, that's the extent of her testimony, we're going to offer it, it's just to offer the

Τ.	patent, it's not to substantively deal with the patent.
2	THE COURT: She is the corporate representative
3	at the trial?
4	MR. DESMARAIS: Yes.
5	THE COURT: You object to that limited
6	testimony?
7	MS. SHAMILOV: With that limited presentation,
8	no.
9	THE COURT: All right. Then how about Schmidt,
10	evidently you had some objections to some of the
11	demonstratives?
12	MS. SHAMILOV: We do.
13	THE COURT: Plaintiff is hopeful we could
14	address those now.
15	MS. SHAMILOV: We could address them now,
16	although I suspect he's not going to be taking the stand
17	before lunch.
18	THE COURT: What I understood is if I order any
19	relief, they may need some time to modify the slide. Is it
20	a fairly extensive set of objections?
21	MS. SHAMILOV: I can group them. I don't think
22	it's going to take a half an hour.
23	THE COURT: Let's get started at least.
24	MS. SHAMILOV: Okay.
25	MR. HADDEN: So Your Honor, you may recall,

Dr. Schmidt has drawn lots of boxes on lots of web pages in his report. And what we got last night, he's drawn new boxes that were not disclosed in any of his reports.

So originally Dr. Schmidt opined that the entire screen was the first area for displaying applications and also the application. And then he would draw boxes around each deal in red and say the collection of all of those were the second area for this claim advertisement. Now he has a different box drawing where he groups the deals in a blue box and says that's the second area for displaying advertisement. He's never drawn that box in any of his expert reports or made that statement in his deposition. I specifically asked him in his deposition what is the second area, is it one of these red boxes or is it the collection of red boxes, and he said it's the collection of red boxes.

So he's just introduced a new theory --

THE COURT: Is this new I guess blue box something different than the collection of red boxes?

MR. HADDEN: Yes. And he's pointed to something else in the HTML which he didn't point to in his opening expert reports.

THE COURT: So to the right there you have source code, that's not the same source code --

MR. HADDEN: No, it's the same scores code --

THE COURT: Hold on. We can only talk one at a

1 time. 2 MR. HADDEN: I'm sorry, Your Honor. 3 Just so I understand, the source THE COURT: code he's pointing to, and what you're showing me is a 4 5 proposed slide for today; correct? 6 MR. HADDEN: Correct, Your Honor. 7 THE COURT: That source code is a different 8 portion of the source code than what he disclosed to you 9 previously? 10 MR. HADDEN: It is the same source code that he 11 had disclosed, but he's highlighting different ads within 12 the source code as being the delimiters of what he is saying 13 the second area is. 14 THE COURT: Is it your contention that what he previously said is the source code for the area, or areas, 15 16 was not the full amount of that, it was just whatever he had 17 highlighted before? 18 MR. HADDEN: Correct. 19 THE COURT: So this would be a new previously 20 undisclosed opinion? 21 MR. HADDEN: Correct, Your Honor. THE COURT: Is that one general set of 22 23 objections? 24 MR. HADDEN: It is one general set. These same

blue boxes appear over and over again.

1	THE COURT: Are they all relating to the first
2	area and second area?
3	MR. HADDEN: Correct, Your Honor.
4	THE COURT: Then, let me
5	MR. HADDEN: I'm sorry, and the related
6	partition term in the '967 patent.
7	THE COURT: Let me get a response from IBM.
8	MR. OUSSAYEF: Counsel, could I keep this?
9	MR. HADDEN: Sure.
10	MR. OUSSAYEF: So Your Honor, this theory was
11	entirely disclosed. If you look here, this is the slide
12	that they are pointing to. And in blue it's a little hard
13	to see. You see the source code is Dr. Schmidt is pointing
14	to is pull-cards.
15	THE COURT: Is what, sir?
16	MR. OUSSAYEF: It says pull-cards.
17	THE COURT: Pull-cards.
18	MR. OUSSAYEF: Pull-cards.
19	THE COURT: Okay.
20	MR. OUSSAYEF: So now, Your Honor, I'm showing
21	you Dr. Schmidt's report at Exhibit 6A, paragraph 143. Here
22	is the portion of Dr. Schmidt's report which talks about
23	this portion of the screen, and now I'll show Your Honor the
24	associated web page contents that Dr. Schmidt opines on.
25	THE COURT: Just for the record at the very top

1 of that I'm seeing at least the phrase pull-cards. Right? 2 MR. OUSSAYEF: Yes, Your Honor. Here, Your 3 Honor, in paragraph 144, the immediate paragraph right after that source code that was shown in Dr. Schmidt's report is 4 5 something that says second portion. It doesn't say second portions. You'll notice the red box goes all the way around 6 7 all three images. 8 THE COURT: You mean it's saying second portion 9 in the report, it doesn't say second area. 10 MR. OUSSAYEF: Yes, Your Honor, Your Honor has 11 construed portion as area. 12 THE COURT: This predates the claim 13 construction? 14 MR. OUSSAYEF: No, Your Honor, it does not predate the claim construction, but the way the expert 15 report goes is it explains what the Court's construction is 16 17 in terms of area and then shows what the area is and labels 18 it as a portion. 19 THE COURT: You're saying the box around the 20 second portion, is that the same as the blue box I saw in 21 your slide today? 22 That's exactly right, it's a MR. OUSSAYEF: 23 different color, I'll acknowledge, but for the jury it was made to distinguish between the first portion and the second 24

portion to make it easier for the jury to see both portions

1 at the same time, so it's simply here in red. 2 Now, counsel for Groupon did say that 3 Dr. Schmidt was asked about this portion, and indeed he did respond that his theory is the entire box around all three. 4 So there has been fair disclosure of this theory both in the 5 expert reports and in the testimony from Dr. Schmidt. 6 7 THE COURT: Well, at least the argument from 8 Mr. Hadden was that he denied his opinion was what you're 9 now purporting to say his opinion was. 10 MR. OUSSAYEF: Yes, Your Honor. I can pull up 11 that deposition testimony if Your Honor would like to see. 12 THE COURT: Well, I just want to understand. 13 Are you agreeing at least on what he said, you're 14 disagreeing with its meaning, or do we not even agree on what he said? 15 16 MR. OUSSAYEF: I believe we all agree that 17 Dr. Schmidt testified consistent with this in paragraph 144 that his theories that the second portion is the entire area 18 19 that surrounds all three images, that's his expert report, 20 that's also his testimony in his deposition. 21 THE COURT: All right. Well, if I need to see it, I'll bring you back. 22 23 MR. OUSSAYEF: Yes, Your Honor. 24 THE COURT: Thanks. 25 MR. HADDEN: Can you leave that there?

So he drew boxes around every deal. This continued on for pages. And he said the second area is the collection of all those red boxes. He never said it was this box.

THE COURT: What is this box?

MR. HADDEN: I don't understand what this box is. What is in the report is three different red boxes.

THE COURT: What I'm being told is that what he meant in the report, what his opinion is, what he told you in the deposition, what he's going to say today is there is a box around all three of those deals, the pizza, the fitness, and the Jiffy Lube.

MR. HADDEN: That is not what he said in his report or in his deposition.

THE COURT: I'm sorry, then. Again, if we compare it to the image from 144, what is it -- what are you saying he said his opinion was at that time?

MR. HADDEN: So it probably looks more similar than it should because of the way the screens are cut off. What happened is you keep scrolling down this page and you get deal after deal after deal and they're not all in this little box he drew here, they would continue, he would draw red boxes around every one of those multiple screens and he said all of those red boxes together are the second area. He never said this box shown there now is the second area.

1 And that source code that IBM's counsel pointed 2 to, if you notice what they highlight at the top, they 3 highlighted. That's not highlighted in his report. 4 THE COURT: I don't understand their argument 5 about the highlighting. He either disclosed these pull-cards source code or he didn't. 6 7 MR. HADDEN: He never pointed to that that 8 identify that pull-card source code as being the delimiter 9 of the second area in his report. He highlighted in that 10 same HTML for that page other tags and said those are the 11 delimiters of the second area and now he's changing it and 12 they're highlighting something that he never pointed to in 13 his report. 14 THE COURT: I suppose we now have a new concept 15 of highlighting versus disclosed. Did he disclose that the 16 pull-cards were part of the source code that, you know, 17 practices the limitation on the second area? 18 MR. HADDEN: Well, the pull-card is part of the 19 HTML page so he would include that, but he never pointed to 20 that tag as being what defines the second area, which is 21 what he's doing right now. 22 THE COURT: All right. Anything else? 23 MR. HADDEN: Your Honor, not on that issue. 24 THE COURT: All right. Anymore on this? 25 MR. OUSSAYEF: Your Honor, I believe we can put

1 this issue to bed by looking at Dr. Schmidt's deposition 2 testimony. This was counsel for Groupon asking Dr. Schmidt 3 much similar to today: 4 "Question: Okay. I'm still confused. So is 5 the second area the collection of the red boxes? "Answer: That's correct." 6 7 It could not be more clear. 8 MR. HADDEN: If --THE COURT: Hold on, I'll give you another 9 10 So some of the examples you have given me have chance. 11 three boxes. 12 MR. OUSSAYEF: Yes. 13 THE COURT: I take it one might be able to 14 scroll down and there is more deals. Is Dr. Schmidt's opinion that the second area is the collection of all the 15 16 deals no matter how many there are? 17 MR. OUSSAYEF: Yes, that's correct, Your Honor. 18 THE COURT: And he's disclosed that opinion 19 where? 20 MR. OUSSAYEF: The second, right here in his 21 deposition testimony, in the picture that we just viewed with the red box around all three. I think the reason why 22 23 there is individual boxes within the red box is because the 24 claim element also requires structure in the advertising to 25 be presented across a network. So his theory is that you

structure individual advertisements and then you send them over in the second partition which is the collection of red boxes.

THE COURT: So the singular box inside the big collective box are satisfying the advertising element that you just mentioned, structure?

MR. OUSSAYEF: Yes.

THE COURT: But his opinion has always been and will be today that it's the collection of all those that satisfies the second area or second partition element?

MR. OUSSAYEF: Yes, Your Honor. And, in fact, if we look at Dr. Schmidt's reply report, here again we have the pull-cards as the first element. So Your Honor, just to clarify how this source code works, if Your Honor sees at the top of this slide at the left there is a little minus sign, that's to expand or contract that portion of the source code. So the pull-card part that goes right with the minus sign is defining the entire element here. And much like in his, what he will present today, Dr. Schmidt here outlined it in blue to distinguish it from the first partition, so there is a first partition and a second partition. Even if we wanted to go by the exact color we're using today, you have it disclosed in his reply report very clearly.

THE COURT: Okay. Thank you.

1 Mr. Hadden, you can come back. 2 MR. HADDEN: So I just want to be clear. Sure. 3 The rest of the testimony says, "And the other boxes that are not shown on that page but are part of the overall 4 5 display." 6 What I understood he was saying at deposition is 7 I'm drawing a bunch of red boxes around these deals that go on pages and pages and the collection of all of those read 8 9 boxes is the second area. 10 THE COURT: I think that's what I just heard. 11 MR. HADDEN: If that's what he is going to say 12 today, I'm fine with that. 13 THE COURT: I'm not hearing a dispute, but maybe 14 I'm missing something. 15 MR. OUSSAYEF: It sounds like there is no more 16 dispute on this issue. 17 THE COURT: He's going to say that all of the 18 collection of all of the deal boxes, that is what he's going 19 to define as the second area, second partition? 20 MR. OUSSAYEF: Yes Your Honor. 21 THE COURT: That's what he disclosed, you have 22 no objection if he expresses that? 23 MR. HADDEN: He can say that, that's fine. 24 Thank you, Your Honor. 25 THE COURT: That takes care of that set of

1 objections. Are there others and are they important to deal 2 with now that the jury is here? I want to make sure IBM has 3 time to, you know, create new slides if I order that. Your understanding is there may still be enough pressing that you 4 5 would need the time; right? MR. OUSSAYEF: Until I hear otherwise from 6 7 counsel. 8 THE COURT: Okay. Go ahead then. 9 MS. SHAMILOV: Your Honor, one thing about 10 exhibits that they plan to use with Dr. Schmidt. 11 THE COURT: No more objections to the slides? 12 MS. SHAMILOV: The rest of the slides, they're 13 all related. 14 THE COURT: So --15 MS. SHAMILOV: I think that in the light of the 16 representation, we're fine with them. 17 THE COURT: Okay. If it's just admission of 18 exhibits, you are not going to have to create new slides, 19 can we defer that safely? If not, we'll do it, but... 20 MR. OUSSAYEF: Your Honor, I would like to 21 briefly hear. 22 THE COURT: Let's hear the objection. 23 MS. SHAMILOV: Yes, Your Honor. There are three These are communications between IBM and Groupon. 24 exhibits. 25 It's that slide that IBM provided to us during the pre-suit

negotiations. They're all marked 408, settlement. They are the subject of the MIL of communications that Your Honor granted. He is going to use these to show, he is planning to use these exhibits to show screenshots of our website to prove infringement. These exhibits cannot come in under the MIL and they're obviously 408.

THE COURT: Is that all three objections?

MS. SHAMILOV: Yes. It's the same for all three. They're the same flavor of the documents, just various assertions of.

THE COURT: Okay. What is the response?

MR. OUSSAYEF: Your Honor, this is relevant to the issue of past infringement of Groupon, so how Groupon looked in the past. Dr. Schmidt will not testify about the fact that these were sent to Groupon. He will not testify about communications between IBM and Groupon. In fact, he is not even really going to show these even on the screen which is why they're not in the slides. It's simply to support his opinion that in the past, IBM created claim charts to show how the website looked in the past. And that is one of the things Dr. Schmidt looked at to confirm that past versions of Groupon's website functioned the same way and still infringe.

THE COURT: Is he going to say here is what Groupon's website used to look like, or is he going to say

1 here is what Groupon said at some previous time, it's website used to look like? 2 3 MR. OUSSAYEF: He is going to say I looked at previous versions of Groupon's website to confirm that my 4 5 opinion that --6 THE COURT: If that's the case, do we need 7 anything more than just whatever the images are? I don't have the documents in front of me but couldn't we just pull 8 9 out what it is that purports to be Groupon's website and do 10 you have a dispute as to what Groupon's website used to look 11 like? Do you understand them to dispute that? 12 MR. OUSSAYEF: I don't understand them to 13 dispute that. No, Your Honor. 14 THE COURT: All right. So is the argument, are you disputing that your website used to look like this? 15 16 MS. SHAMILOV: No. 17 THE COURT: Are you going to argue, are you disputing that Dr. Schmidt can say this is what Groupon's 18 19 website used to look like? 20 MS. SHAMILOV: He can show the images without. THE COURT: 21 He can. 22 MS. SHAMILOV: He can show the images only 23 without the markups and certainly not the pages from the document. There is enough on every page that gives the 24 25 jurors the context excluded under the MIL. So I'm fine

1 redacting everything on a slide, you know, whatever slide. 2 I don't know which pages that Dr. Schmidt needs to show he 3 used. We need to redact. 4 THE COURT: Can we not just come up with a 5 sanitized image that shows what you all evidently agree Groupon's website used to look like? 6 7 MS. SHAMILOV: That is fine. I think that is 8 kind of what our position was during the meet and confer. That is fine you if you want to create those. 9 10 THE COURT: Then do that. There is no dispute 11 this is what Groupon's website used to look like, and it 12 would be helpful to show the jury that. 13 MS. SHAMILOV: Sure. 14 THE COURT: But I understand the arguments of 15 prejudice and et cetera, so they don't need to hear about the communications and settlement and all that. 16 17 MS. SHAMILOV: Yes. 18 THE COURT: All right. So we have time to make 19 that happen. 20 MR. OUSSAYEF: Yes, Your Honor. Thank you very 21 much. 22 THE COURT: Sure. 23 MR. OUSSAYEF: So I understand now that's all 24 the issues. Those are the issues. 25 THE COURT: Is there more Schmidt issues?

1 MS. SHAMILOV: I think those are the issues as 2 Obviously, when Dr. Schmidt takes the stand, 3 depending on the testimony, something may come up but that's all for now. 4 5 THE COURT: Okay. We're going to defer the substantive discussion of the depositions because as I 6 7 understand it, were hours aweigh from playing depositions. Correct? 8 9 MR. DESMARAIS: (Nodding yes.) 10 MR. OUSSAYEF: Yes, Your Honor. 11 THE COURT: Let me just say, and I don't want to 12 keep you all up any longer at night than you are already up, 13 but I believe you gave us at 3:00 p.m. yesterday the 14 objections for depositions you thought you might play today. So we've been staying up late trying to figure those out. 15 The pretrial order I think said you would give 16 17 it to us two days before you intend to play it. That is 18 certainly preferable for our health and sanity. But also 19 the way you put this together is very, very confusing to us. 20 So I think we're going to get a model for you that we have 21 seen used before that makes it easier for us to figure out just what you are arguing about. 22 23 MR. OUSSAYEF: Yes, Your Honor. And one more 24 I think it would be beneficial if the parties would thing. 25 limit their objections to one sentence instead of big

paragraphs. I think there was kind of a back and forth, tit for tat thing going on. I think would help both parties

3 narrow the issues and make it very crisp.

THE COURT: I have seen many people press on the meaning of one sentence, what that really means. You all had blown through any good faith explanation of one sentence. But, yes, that would help. But actually what would be more helpful is just you have subsets of objections within other objections. Then you both make the same objection. And it's unclear if you are talking about the same. So anyway, we'll give you a form that I think will be easier for us.

MR. OUSSAYEF: And, Your, Honor one more thing. The parties went through the trouble of specifically identifying counters to specific testimony; and my understanding that it is Groupon's position that they don't necessarily have to abide by the specific counters to particular testimony that we identified. They say that, well, anyone who designated any part of the transcript can use any other part. I think it would be helpful to get some guidance because that would constrain the counterdesignation to a much manageable set.

THE COURT: I see that as pretty much the principal objection before me right now, and I will give you

1 a decision on that probably later today and certainly before 2 you have to play today's deposition. 3 MR. OUSSAYEF: Thank you, Your Honor. THE COURT: All right. Let's take a short 4 5 break, and we'll come right back. (Brief recess taken.) 6 7 8 (Proceedings reconvened after recess.) 9 THE COURT: The jurors are all here, and we'll 10 bring them all in. 11 (Jury returned.) 12 THE COURT: Good morning, ladies and gentlemen 13 of the jury. Welcome back. It's nice to see you all. 14 are just about ready to begin. The first order of business is Mr. Looby has 15 16 some more paper for you. These are photos of witnesses that 17 we anticipate will be called to testify at trial, so we 18 thought it might be helpful for you to have that and you can 19 add them to your notebooks, if you wish. 20 And just one point of clarification. I know I 21 said we would get you lunch everyday. The days we're ending at 1:00 o'clock, we don't plan to have a lunch break because 22 23 that would just simply over extend your time and limit the time we could get for trial, so we won't be buying lunch for 24

you on the 1:00 o'clock days. We will today and you will

Good morning, Mr. Filepp. Can you please tell the

jury where you currently work?

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Filepp - direct

A. Yes, I work with -- sorry. I have to get used to the microphone here for a second.

I work at IBM's TJ Watson Research Center.

Q. And what do you do for IBM?

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- A. I'm a senior software engineer.
- Q. What do you do as a senior software engineer?
- A. I design and develop software and also prepare patent applications and write research papers.
- 9 Q. And how long have you been doing that?
- 10 A. I have been doing that at IBM for about 20 years now.
- 11 Q. And have you received any awards for your work as an engineer?
- A. Yes. I've received an IBM Corporate Award which is
 their highest award for technical achievement, and I've
 received an Outstanding Technical Achievement award and a
 few research division awards.
 - Q. And you mentioned that one of your roles is to write papers and patents. Are you the inventor on any issued patents?
 - A. Yes, I have been the inventor on 21 issued patents.
 - Q. And what is the general area of those patents?
 - A. Well, some of them relate to the issues at hand here and they come out of the same family of patents.
 - Some patents relate to things like multi-mobile browsers in which users can talk and type and listen and see

Filepp - direct 1 multiple ways of handling interfaces. 2 And other patents deal with things like 3 benchmarking the complexity of human tasks. 4 And other patents deal with things like 5 automating the provisioning of servers into virtual environments. 6 7 And others deal with things like automating the compliance status, security compliance status of servers. 8 9 So there is a variety of things. 10 MR. HARRITS: And I'm going to hand out what has 11 been marked as Plaintiff's Exhibits No. 1 and No. 3. 12 Honor, we have binders of exhibits and demonstratives. May 13 I approach? 14 THE COURT: You may. 15 MR. HARRITS: How many copies would the Court 16 like? 17 THE COURT: We will take three, if you have 18 them. 19 MR. HARRITS: Absolutely, Your Honor. 20 Thank you. 21 (Binders passed forward.) 22 BY MR. HARRITS: 23 Now, Mr. Filepp, can you please turned to the slide marked PX-0001. Can you please tell us what that is? 24 25 This is the '967 patent. That is the method Α. Yes.

- 1 for presenting applications in an interactive service.
- Q Q. What is -- can you turn to slide, PX No. 3. What is
- 3 Plaintiff's Exhibit No. 3?
- 4 A. That's the '849 patent. Method for presenting
- 5 advertising in a interactive service.
- 6 MR. HARRITS: Your Honor, I offer Plaintiff's
- 7 Exhibits No. 1 and No. 3.
- 8 THE COURT: Any objection?
- 9 MR. HADDEN: No, Your Honor.
- 10 | THE COURT: Those are both admitted.
- 11 (PX-1 and PX-3 were admitted into evidence.)
- 12 BY MR. HARRITS:
- 13 Q. Mr. Filepp, are these two of the patents that are
- 14 being asserted in this case?
- 15 A. Yes, they are.
- 16 \ \Q. And are you an inventor on those patents?
- 17 A. Yes.
- 18 Q. Now I'd like to talk a little bit about your
- 19 background before we get into how you became an inventor of
- 20 | the '967 and '849 patent. Can you please tell the jury
- 21 where you have live?
- 22 A. I live in Westport, Connecticut.
- 23 \ Q. Do you have any family?
- 24 A. Yes, I'm married and I have five kids.
- 25 Q. And where were you born?

- 1 A. And grandkids.
- Q. Congratulations. And where were you born and raised?
- 3 A. I was born in Nyack hospital, Nyack, New York, and I
- 4 was raised primarily in Nanuet, New York. Downstate New
- 5 York.
- 6 Q. Did you attend college?
- 7 A. Yes, I did.
- 8 Q. Where did you attend?
- 9 A. I went to Manhattan School of Music.
- 10 Q. What did you get your degree in?
- 11 A. Music with a Major in Voice.
- 12 Q. Did you ever work professionally as a musician after
- 13 you graduated college?
- 14 A. Yes, I worked for a couple theater companies.
- 15 Q. And what theater companies were those?
- 16 A. I worked for the Lamont Experimental Theater Company
- 17 | touring -- actually performing in Europe for awhile and
- 18 touring Europe and the Middle East. And I worked for a
- 19 company called Camera Obscura which was originally based out
- 20 of Carnegie Mellon in Pittsburgh, but we performed in the
- 21 Netherlands and Holland.
- 22 Q. What did you do after Camera Obscura?
- 23 A. I got a job as a programmer and systems analyst at a
- 24 Dutch service bureau called Eleckronische Administrative
- 25 | Centrum "Rotterdam" B.V.

Q. And what did you do for them?

- A. Well, I was a programmer and systems analyst.
 - Q. And how did you get into programming with a music background?
 - A. Well, actually my father was a technical writer at IBM, and I wrote my first program at 13 in 1964. My father was teaching the course to some of his colleagues. He was writing a book on PO 1 which was an early high level programming language. So he was holding the class for some of his colleagues in our family room at home and insisted my sister and I attend this thing, so we attended and wrote programs.
 - Q. And prior to working at the administrative center in rot TER damn did you have any other experience with XULTer programming?
 - A. Yeah. Well, I worked as a summer intern at IBM in between high school and college. I worked in the middle of the night operating a couple of big computers in the scientific and industrial research and development division.

Then when I started college, I worked at nights as a computer operator, among other jobs.

And when I got out of college, I got a job as a technical writer which lasted about two weeks before they transitioned me into programming because basically they needed programmers, and back then you didn't have to have a

- master's in computer science or anything, you just needed to be able to program.
 - Q. So have you taken any formal college courses on programming?
- 5 A. No.

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- Q. Where did you get your training?
- 7 A. On the job and self-taught.
- 8 \ Q. And after your summer internship, you mentioned IBM.
- 9 Did there come a time when you worked for IBM again?
- 10 A. Yes, I worked for IBM. And I started with them in
- to Trintex to work in the systems architecture department.

the beginning of 1985 as a consultant, and they assigned me

- 13 Q. Before we talk about Trintex, I'd like to first take
- 14 | a minute and talk about IBM. We have some demonstratives in
- 15 your folder which I believe have been premarked as
- 16 | Plaintiff's Demonstrative No. 1. Will these slides aid you
- in your testimony?
- 18 A. Yes.
- MR. HARRITS: Your Honor, I offer Plaintiff's
- 20 Demonstrative No. 1.
- 21 THE COURT: Simply as a demonstrative.
- 22 MR. HARRITS: Simply as a demonstrative.
- 23 | THE COURT: Any objection to offering that as a
- 24 demonstrative?
- MR. HADDEN: No, Your Honor.

THE COURT: It's not necessary to offer the demonstratives. They're not going into evidence.

MR. HARRITS: Okay. May I publish? Thank you.
BY MR. HARRITS:

- Q. Can you please tell us, Mr. Filepp, when was IBM founded?
- **A**. **1911**.

- Q. And what sort of business is IBM in?
- A. IBM is a computer technology company that offers a variety of services and does a bunch of different things: design and manufacture hardware, they design and develop software, and they provide cloud computer services. They operate datacenters on behalf of hundreds, if not thousands of other companies. And they offer cognitive computer services, like Watson, for example.

16 So a broad range of things in the computer area.

- Q. And if we look at the next slide, can you please tell us what this is showing?
- A. Yeah. This is a timeline that shows some selected highlights of IBM achievements from 1944 when they developed the first computer with -- their first computer with hardware produced by the Navy until 2017 when they made the quantum computing model and computer available for business to experiment with.
- Q. Now, are any of these dates on this timeline relevant

1 | to the '967 and '849 patent?

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- A. Yes. The 1988 launch of Prodigy and the production is relevant.
 - Q. Now, in enter order to make all these accomplishments, does IBM spend heavily on R & D?
 - A. Yes, they do. As I understand it, they spend close to the \$6 billion a year.
- Q. And if we look at the next slide, can you please tell us what this slide is showing?
- 10 It shows that IBM invest over \$5.6 billion a Α. Yep. 11 year in R&D and it shows the fact that IBM has been the 12 world leader in patent issuances for the past twenty-five 13 years. So of all companies in the world, IBM has had the 14 most patents every year, every year in a row for twenty-five years, and that's something IBM is pretty proud of and they 15 16 publicize it.
 - Q. Have others recognized IBM's innovations?
 - A. Yeah, sure. The next slide would show that. IBM has had six Nobel prize winners, and it's won the Turing Award which was the big deal six times and won the U.S. National Medal of Technology and the National Medal of Science and had a lot of employees who were inductees into academic groups.
 - Q. You mentioned that you worked at Trintex as a consultant for IBM. Can we please talk about what Trintex

1 | is. We'll go to the next slide. What's Trintex?

by the general public.

- A. Trintex was a joint venture of IBM, Sears and CBS, and it was originally formed to create and offer an online -- well, some sort of an information service for use
 - Q. And what did each of these companies bring into the partnership?
- A. Well, Sears, some of you may remember Sears had a product catalog which was pretty popular, retail catalog, so

 Sears provided the retail experience and catalog

 information, that was the intent, they also provided parking

 for us.

IBM provided the technical people and computer systems and software, CBS, well CBS provided editors and artists and they also provided some technology. CBS had been involved in some early online testing a few years prior to that.

- Q. When did these three companies come together to form Trintex?
- A. **1984**.

- Q. Did all three of these companies remain in the partnership?
 - A. No, CBS dropped out in 1986. They were facing some significant business problems and so they got out of all their technology endeavors and they just focused on their

1 news.

- Q. If we look at the next slide, did there come a point when Trintex changed its name?
- 4 A. Yes, Trintex changed its name to Prodigy in 1988.
- 5 Q. Was the Prodigy online service that Prodigy
- 6 mentioned, was that a new technological idea at the time?
- 7 A. Yes, I believe it was.
- 8 \ Q. Now, you talked about you originally worked for IBM.
- 9 Did there come a time when you became a full-time employee
- 10 of Trintex?
- 11 A. Yes, I became an employee of Trintex in September of 12 '85.
- 13 Q. And how big was Trintex when you first started?
- A. When I first joined in February of '85, they were
- about fifty people there including everybody, from the top
- down to the bottom.
- 17 \ Q. And what was your initial role at Trintex?
- 18 A. I worked in the systems architecture team to try to
- 19 help develop the system architecture.
- 20 Q. What do you mean by developing the systems
- 21 architecture?
- 22 A. The system architecture is the blueprint for how
- 23 | everything is to fit together to realize the service or
- 24 product or whatever it is that you're trying to create. So
- when you're going through a development phase you have a

lot, you potentially have a lot of different people working on a lot of different things. But by the time we ramped up fully at Trintex, we had about 5,000 employees and we had about a thousand people working in technology.

So all these people had to have a common understanding of what they were working toward, they had to have -- just like having a blueprint, actually not just like, but analogous to having blueprints in a building project so that people doing construction know what has to be built and everything is going to fit together when it finally is done.

- Q. I'm going to show the cover of the '967 patent on the screen. The inventors listed on the screen, were these some of the individuals that you worked with?
- A. Yes.

- Q. And what did they do?
 - A. Ken Appelman worked on the reception system for the a while. Alex Bidwell was one of the systems architecture group. L Wolf was the systems architecture and managed the group when I first joined them. James Galambos was more of a user experience guy. He was on the content side. And Sam Meo works on the reception system and he worked quite a bit, we had an interpretive language, programing language that we would allow to be shipped down to the reception devices, he worked on that, and eventually managed the reception group.

overcoming and design.

I would like to start talking about the first issue, content creation inefficiency. Can you explain to us what that was?

- Α. Yes. So there was --
- 12 Actually I believe you may have a demonstrative that 0. 13 may help to explain that issue. Plaintiff's Demonstrative
- 14 2. Would that help?

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Α. Yes, I believe it would, yes.

16 MR. HARRITS: Your Honor, may I publish 17 Plaintiff's Demonstrative Exhibit 2?

THE COURT: You may, provided you show it to counsel.

MR. HADDEN: No objection.

MR. HARRITS: Your Honor, may Mr. Filepp step down to approach the demonstrative?

THE COURT: That's fine.

24 BY MR. HARRITS:

Mr. Filepp, what is Plaintiff's Demonstrative Number

2 showing?

A. Well, it shows a simulation of a game that was offered in early online test which was conducted by AT&T and CBS. I mentioned that CBS had some prior experience. So there was an AT&T/CBS joint venture called Venture 1 which was a test that was conducted in Ridgewood, New Jersey that offered essentially a Videotex service which was described yesterday a little bit to about 900 households.

So in this service --

- Q. Before we get into the service, how -- was there a name for the type of service that the Venture 1 was offering?
- A. Well, the implementation was basically what we would call on a dumb terminal.
 - Q. What do you mean by a dumb terminal?

THE COURT: Please keep your voice up. You don't have the microphone over there.

THE WITNESS: I'm sorry, you folks can't hear me. I'm sorry. I apologize.

THE COURT: Can ask the question again, please?

- Q. What does it mean to be a dumb terminal?
- A. So dumb terminals were designed specifically to display data to users and to collect their key strokes and they didn't process actually any of their business logic of an application, all they did was show data and collect key

1 strokes.

- Q. And how did that play out in the Make-A-Monster game that they offered on this service?
- A. So in the dumb terminal implementations, generally a computer, a more full-sized generally purpose computer would handle the business logic of the applications, and data would be sent down to the dumb terminal.

This area is supposed to be a terminal, by the way, and it would be sent down at a full page of data.

So, for example, the point of this game was to the allow users to select different pieces of monsters and then be able to sent a request up to the business process which would then serve up a page, a full page that contains the monster body parts, and so that was suppose to be amusing.

- Q. So what would the monster, the page of data that a user would receive look like?
- A. So these things had to be prebuilt by artists. Every possible combination had to be filed and stored in the server. So if a user requested a froggy head and a tentacle body or squid body and froggy legs, then they would enter, they would check froggy head, tentacle bod, froggy legs, hit enter. The message gets sent, the froggy head, tentacles and froggy legs, and that particular page, that entire page gets sent down and shown to the user.

Filepp - direct

Q. And what would happen, Mr. Filepp, if say, for example, someone were to select the squid head?

- A. Well, then if they selected the squid head as a request, you would go squid head, squid body, and froggy leg page. And so then that page would get both sent, requested and pulled down, and shown on the display as a whole.
- Q. And what sort of problems did that cause?
- A. Well, so I found out about this by interviewing some of the people that we had who came from CBS who worked on the AT&T venture.

So I wanted to learn what some of the problems were that they had, and one of the problems that they had was that at the end of the trial, where they were supporting 900 households, they had 900 people creating content because every single possible combination of every piece of data had to be duplicated over and over again potentially by the artists.

So, for example, here you have these two full pages, and we have two pieces of duplicate data. We had froggy legs being done twice. We have the tentacle body being done twice. So that's kind of wasteful and it doesn't scale. You can't hire that many people to do the work. We would have to have 10 million people creating content.

- Q. And how did your team solve that problem?
- A. So since we weren't targeting smart -- we weren't

Filepp - direct

targeting dumb terminals, we were targeting smart perception systems which were basically PCs. We wanted to take advantage of the fact that people were starting to buy PCs. PCs were available but they were not really prevalent because people didn't have that much use for them other than spreadsheets and word processing, but we thought this would be a good platform we thought to target because then you have some general purpose computing capabilities.

So you can take advantage of the processing power of the user's PCs and instead of having to prebuild everything, you can just have, that's the body individual components. So you can have the artist create a squid head and a squid body and a squid leg and a froggy head and froggy leg, and just put those out in the server, and they don't have to keep on duplicating them all the time.

- Q. Did your team have a name for those various pieces that you are showing us?
- A. Yes, we call those objects.
- Q. And then how did it work, say, if a user were to request, we'll call them the froggy head, the tentacle body, and the froggy legs. How did it work in the Prodigy system you guys actually came up with?
- A. So the user would send a request for a froggy head, and we would find the froggy head and deliver the froggy head. And they requested tentacle body, and, excuse me, and

Filepp - direct

we would find and deliver that although maybe not upside down. And we would find the froggy legs and deliver that.

And then once it is delivered, since we're dealing with a PC here, and it is relatively smart and it has some sort of storage capability, not only have we avoided this duplication of data all over the place but we can also store the data locally in our PC.

- Q. So then how did it work in your system if say now I wanted to select the squid head, the squid body, and the green legs? How would the Prodigy system have worked doing that?
- A. So then the reception device, the user's PC would look for the squid head and say, oop, I don't have the squid head in local storage. Then I have to go out and get the squid head. Go out and get the squid head. It would look in local storage to see does it have the squid body? Then, yes, it does. So I can use the squid body from local storage.

I'm still not sure if this is upside down.

And with the froggy legs, it would also look, retrieve it from the local storage and present that to the user. So then you only have this amount of data that had to traverse the network, and you can store the stuff locally so it could actually come back much faster because it doesn't have to go through the network, but it's less demand on the

- 1 network, faster response time to the users, and now that we
- 2 have the froggy -- the squid head, we can store the squid
- 3 head locally on the user's PC so the next time around they
- 4 don't have to go back to the squid head, too. It's already
- 5 there.
- 6 Q. Thank you very much. Mr. Filepp, you can now take
- your seat.
- 8 A. Thank you. (Witness retakes witness stand.)
- 9 Q. Now, were there any documents that your team wrote
- 10 that describe this process of using objects that you just
- 11 discussed?
- 12 A. Yes.
- 13 Q. And what was the name of that document?
- 14 A. The Trintex Object Architecture.
- 15 \ \Q. If you could turn in your binder to Plaintiff's
- 16 **Exhibit 36?**
- What is Plaintiff's Exhibit 36?
- 18 A. That is the Trintex Object Architecture, dated
- 19 October 30th, 1986.
- 20 MR. HARRITS: I offer Plaintiff's Exhibit 36.
- 21 MR. HADDEN: No objection.
- 22 THE COURT: It's admitted.
- 23 (PX-36 was admitted into evidence.)
- 24 BY MR. HARRITS:
- 25 Q. And what is the title -- I'm sorry. What does the

- 1 date of October 30th, 1986 indicate?
- 2 A. That is the date I typed it.
- 3 Q. And who authored this document?
- 4 A. I did.
- 5 Q. And what does this document describe?
- A. This document describes a structure of the objects
 that we would use in Trintex and how they could be used and
 how they should be treated also, potentially.
- 9 Q. At the time that you and your team was working on
 10 coming up with these objects, were you aware of anyone else
 11 using a similar solution to the problem of content creation?
 - A. No.

- Q. I'd like to turn back to slide 8 and talk about the second problem that your team encountered, bottlenecking.
- 15 Could you please explain to us what that is?
- A. Yes. That's an issue with sending data and serving data through a network. So I think there is another slide.
- 18 Q. Yes, let's jump to slide 10.
- 19 A. **Yes**.
- 20 Q. What is slide 10 showing us?
- A. Well, it shows us a network path essentially. So
 this is -- so on the right-hand side you have a terminal or
 potentially a PC, and that is the user's. That is a part of
 the user.
- 25 Q. **Sorry**.

Filepp - direct

A. And then the next box is a modem which is a modulator which is used to essentially translate analog and digital electronic signals back and forth so that you can send data over phone lines. So it's a way to use a telephone network to deal with transmit data. And those were very, very slow.

- Q. Were those things back in the day that used to make all that noise when everyone wanted to connect to the Internet?
- A. Yes, exactly. Right. So on this one, you see that this is 1200 bits per second, this modem. So 1200 bits is about 150 characters. Actually, it's less than that when you really get down to it. But it's about a tweet per second basically. So if you are going to ship a picture which could be, you know, many thousands of characters essentially, that could take hours to ship down through the network.
- Q. And so how did this relate to the issues of bottlenecking that we were describing?
- A. Yes, so there is limited -- you have that pipe in the middle that has a limited bandwidth. So you want to try to reduce the traffic through there, if possible. And you also want to try to reduce the work that the server on the back end has to do, because if you are trying to serve data to 10 million people or whatever, then you may have to buy a lot of servers to do that. So there are all these constraints

on how much data you want to push down through the network.

Q. Now, I want to talk about a real world example of that. If we go to the next slide.

As you said, in a dumb terminal approach, what would happen if say a user was trying to request weather data from a server in the dumb terminal approach.

- A. Well, they request a weather page, and that full page would be shipped down through the modem and eventually be displayed at the terminal. And, again, the terminal is dumb so all it knows how to do is to display and to count key strokes.
- Q. And if we were to request -- if you wanted to request the next day's weather map, what would happen there?
- A. Well, you'd have to request the next day's weather map, and that request would go up to the file server or server in general, and the server has, it runs the business logic, and it would pull out the next day's weather page and send that entire page down to the terminal.
- Q. Is that where we're seeing this animation here?
- 20 A. Yes.

- Q. And what were the problems with that approach in regards to bottlenecking?
- A. Well, there were two things. One is that you have to go up to the server every time to get the all the data whereas with the Make-A-Monster thing, we just showed you

1 that you don't have to go up to the server all the time. 2 The data can be served locally. For instance, the map of 3 the United States. Well, the map of the United States could be used in a lot of different contexts. It doesn't have to 4 5 be used for the weather. You could use it for other things, So why not make that into an independent piece? So 6 7 there is just inefficiencies with the full page approach. 8 So let's talk about how Prodigy did it. I'm sorry. Q. 9 Wrong way. Prodigy's approach. 10 How is the Prodigy's approach different? 11 Α. Well, as I described in the Make-A-Monster thing, we 12 composed our, we used these objects that could be retrieved 13 and assembled by the intelligent PC basically. 14 Is that where we're seeing this animation here? Yes, you see it on a number of objects were pulled in 15 to create the weather map. 16 17 Okay. And then how would it work? What was the next Q. 18 thing that would happen in the Prodigy system approach if I 19 were to, once you received the page? Well, we would store the objects, at least some of 20 21 them, locally. Yes, right. So those are kept in, there are 22 two types of storage we had. We had relatively prominent 23 storage and we had memory storage. And these things would probably be kept in memory storage, but maybe not. Maybe 24

25

prominent.

Q. What would happen if I wanted to request the next day's weather, say, tomorrow's weather?

A. Well, then the reception device would process the weather application. So, again, the distinction, one of the distinctions that we have here is that because we're using a PC and it's a general purpose computing device, then we can actually run the applications inside our local system as opposed to having to go up to a central server to run it on behalf of us.

So that application, the weather application would look to see, does it have all the data it needs? Does it have objects locally in the local storage? And in this case it would. It has the map of the United States. It may have the sun, if it needs that.

and stuff that it doesn't have, then it would go out to the central server. And the central server then is really being used more as, in some cases, as a data repository. So it's sort of -- anyway, so we would pull out data that we didn't have and bring it down from the central server and assemble with the stuff we did have locally.

MR. HARRITS: Mr. Kelly, can you advance the slide. There we go.

BY MR. HARRITS:

- Q. Is that what we see happening here?
- 25 A. Yes.

Filepp - direct

Q. Now, how did this -- and what effect did this storing of local objects and reassembling them on the screen have on the issue of bottlenecking and the system that we were dealing with?

A. Well, it had two effects. One effect was that it reduced the amount of data that had to traverse the network so things could be served local -- from the local storage faster. It was a better user experience.

It involved less demand on the servers also for a few reasons. One is that it didn't have, servers didn't necessarily have to serve such large amounts of data, but also the logic of the business application that is executed at the user's PC. So that is, that is good for everybody.

- Q. And what indicated whether or not one of these objects would be stored on the user's computer?
- A. In the Trintex user architecture, we had a header portion of each object, and then we had some data that was data flags that were meant to show whether objects should be stored locally or not.
- Q. Let's pull up Plaintiff's Exhibit 36 again and please go to page 16.

And what is being shown here, Mr. Filepp, on page 16, Plaintiff's Exhibit 36?

A. This shows part of the object header structure, and it shows some specific bits and data is composed of bits and

Filepp - direct

bytes. Bits are 1s and 0s. So we reserved basically a flag, so we had flags that are saying whether data should be stored in persistent storage so it will live across user sessions, so when you turn your PC off and you have turn it back on again, it would still be there, or whether it should just be stored to the local memory. So when you exited your Prodigy session and you signed back in again, then it would not be there anymore. It would just be there for the local session.

And also, some objects weren't eligible to be stored at all because they might be too volatile.

- Q. So we see this term cache or caching here. What does that mean?
- A. So caching is what we refer to as being in memory storage as opposed to staging which was essentially writing out to the more permanent storage.
- Q. When you are talking about storage, you are talking about on the user's device?
- A. Yes, on the user's device on the PC.
- Q. And were you aware of anyone else using this sort of system to solve issues related to bottlenecking while you were working on developing Prodigy?
- A. To store down to the user's PC, no.
- Q. Now, I'd like to turn back to slide 8 and talk about the third problem that your team addressed.

Filepp - direct

How did your team address the issues of making Prodigy affordable? Actually, sorry. Let's take a step back. What was the problem with affordability?

A. Oh. So Prodigy or Trintex, whatever you want to call it, had to, we basically had to do everything ourselves.

So there was a huge investment on the part of IBM and Sears when they put in about a billion dollars to this thing that took years to do.

We had to develop our network. We basically acted as the equivalent of Internet service providers as well as the backbone as well as the content creators as well as everything. So from soup to nuts, business systems to billing to handling the credit card purchases to being able to talk to other businesses and other networks, for instance, being able to provide travel applications and connect to American Airlines or connect to, you know, Chase Bank or connect to Dow Jones or whatever. So we had to connect to these different networks. We had to be able to. Anyhow, there was this huge development in cost so we needed to be able to deal with that cost.

- Q. And how did your team come up with dealing with that cost?
- A. Well, there was a business decision to try to subsidize the user cost by offering advertising space on the screens for sale to advertising.

Filepp - direct

Q. So if we look at slide 19. What on here would have been the advertising?

- A. So the blue portion Polaroid Spectra System would be a leader ad.
- Q. And how did that make the system more affordable?
- A. Polaroid would rent that space for essentially it would be hits like it had in a television broadcast and broadcast TV. You know, Mr. Clean is going to potentially popup while you are watching Days of Our Lives or something.
 - Q. And did your team structure the advertisements in any way to help them to work with the Prodigy system?
 - A. Well, again, they were structured as objects, and the point of objects was that data could be reused in a different context and it could be relocated. It could be put in different places on the screen. So you could take that same Polaroid Spectra System thing and put it up at the top of page if you wanted to. It could be shown under different, you know, different applications, relatively independent applications.

At the same time, there were other considerations with advertising because you didn't want -- when you are working a deal for advertising, I think you have to commit to being able to show the ad to certain -- well, they would target certain use profiles, demographics. So, you know, people that seemed to have a history of buying

Cheerios might see a Cheerios ad or they might see a Corn Flakes ad instead. I don't know.

So there was -- so you wanted to have some sort of a pipeline of advertising that could be presented that is relatively independent of the rest of the content that the users may be navigating to. At the same time, you also wanted to -- a few things. You wanted to also be somewhat sensitive to the context of what you working with what you are presenting. So there was some particular cases where, for example, with ads for airlines, they didn't want us to show ads for airlines when there is a new story that says there was a crash. So in that case, don't show the ad for airlines.

O. And --

- A. And also we need to be able to track, track the usage because we needed to be able to report back to the advertiser, hey, are people clicking on these things or not.
- Q. So did your team do anything to allow the advertisements to efficiently reach a user's device?
- A. Anything differently than what I just described?
- Q. Yes. Is there a time in which the advertisements were sent as to opposed to other objects that were posed?
- A. Yes. Some ads were queued for delivery and could be prefetched, so they could be fetched at times when the user didn't request it necessarily.

Q. And when your team was working on displaying advertisements in this way, were you aware of anyone else working on a similar solution?

A. No.

Q. Now, I'd like to discuss how these problems that your team came up and solved with relate to the '967 and the '849 patents that are at issue in this case. I'm going to pull up the cover of the '967 patent.

Can you please tell us how Plaintiff's

Exhibit 1, the '967 patent, relates to the problems that
your team was trying to solve?

- A. Yeah. The '967 patent describes essentially slicing up the real estate of a display screen and being able to target objects that were shown in various portions of the display screen.
- Q. And if we look at Figure 3a of Plaintiff's Exhibit 1, what is this showing?
- A. So this shows an example of doing that partitioning or divvying up of the real estate of the display screen and shows in this particular case, it is showing that we have an ad partition and we have some body partitions. It's got, the window partition is a transient thing that is a popup window that is being exemplified there. So this is to teach, this is to teach people that displays can be divvied up in this way and objects can be directed to them.

Case 1:16-cv-00122-LPS Document 408 Filed 09/18/18 Page 64 of 279 PageID #: 18994 Filepp - direct 1 Essentially it's the same thing as what HTML does, did with 2 train tags. 3 MR. HADDEN: Objection, Your Honor. Expert 4 testimony. 5 MR. HARRITS: Your Honor, Mr. Filepp is really explaining why his invention was innovative and why he 6 7 thinks it does what it does. 8 MR. HADDEN: He is talking about HTML which came 9 after his invention. 10 THE COURT: HTML came out later, right? 11 MR. HADDEN: Correct. 12 MR. HARRITS: Correct. But Mr. Filepp was 13 designated on topics related to the innovation of his 14 invention. 15 THE COURT: All right. I'll see you all at 16 sidebar. 17 Ladies and gentlemen, feel free to stand up and move around if you would like. 18 19

(Sidebar conference held.)

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MR. HADDEN: I think we have to set some lines. I thought the agreement yesterday was we're staying to the left of the timeline of the invention of '967 with this witness. Are you now going beyond that?

MR. HARRITS: My understanding was we're not to talk about the way in which his invention may or may not

Filepp - direct

read on specific websites that were done on the future thing.

THE COURT: Well, certainly that. But I don't know that the ruling or agreement was that limited. What are you proposing to do with this witness in the post '967 time frame?

MR. HARRITS: I believe that was going to the entire substance of the testimony. He was previously designated by testimony on the topic of the innovation of his website. He testified to the very same fact both in his deposition of the Priceline case and what they deposed here as well. They knew this was his testimony. They knew he believed this. This can't come as a shock to him.

MR. HADDEN: Let me specifically object to this reason that he can't be a pseudo expert and talk about how his invention relates to current technology. That is why he asked to change the timeline. That is what we expected to happen. Now he has gone beyond that and we will ask for an instruction to strike the last answer.

THE COURT: And when you say the entire substance, are you suggesting there is a whole lot more coming?

MR. HARRITS: No.

THE COURT: Or we're done.

MR. HARRITS: That would be it.

1 MR. DESMARAIS: I think that was it, Your Honor. 2 THE COURT: That was it. And you have some 3 other topic to move on to with him? 4 MR. HARRITS: Yes, Your Honor. 5 THE COURT: All right. So we're not getting any more of this. 6 7 MR. HADDEN: I still move to strike the last 8 answer. 9 THE COURT: And do you want me to say something 10 more than that or just -- I mean they may or may not have heard what the last answer was. 11 12 MR. HADDEN: Yes. I think he going to say he is 13 going to testify about HTML and move to strike the answer. 14 THE COURT: And you oppose that. 15 MR. DESMARAIS: Yes, Your Honor. I think this 16 witness works currently at IBM. He works with HTML. 17 works with the things that he just spoke about from his personal knowledge. It is not expert testimony. He didn't 18 19 opine on infringement. He didn't go anywhere near it. 20 just talked about how HTML works, which he works with 21 everyday. 22 MR. HADDEN: No, he said this works like HTML. 23 THE COURT: I'm going to I guess sustain the 24 objection consistent with the rulings yesterday. I'm going 25 to strike the answer and just point out to the jury that

Case 1:16-cv-00122-LPS Document 408 Filed 09/18/18 Page 67 of 279 PageID #: 18997 Filepp - direct 1 this witness is not here to talk about -- how would you have 2 me put it? 3 MR. HADDEN: Talk about the web or HTML. THE COURT: He is not to talk about the web or 4 5 HTML. 6 Anything more? 7 MR. HARRITS: So to clarify, if we intend to ask him was this before the World Wide Web, that's fair game to 8 9 ask him? 10 MR. HADDEN: We already took that off the timeline for that reason. He can talk about to the left of 11 12 the timeline. 13 THE COURT: You are going to have an expert, and 14 the jury will know that 19-whatever was before 19-whatever. 15 MR. HARRITS: Right. THE COURT: So he is not to talk about HTML or 16 17 the web. Okay. Thank you. (Sidebar conference ends.) 18

THE COURT: All right. I have ordered that the last answer be stricken from the record. Ladies and gentlemen, I ask you not to consider the last answer. This witness is not here to talk about HTML or the web.

Mr. Harrits, you may continue.

BY MR. HARRITS:

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Q. Mr. Filepp, can you please tell us what this bottom

1 section is here?

- A. Yes, that is a command bar in which we allowed the user to navigate through the system.
- Q. Now, if we look at Plaintiff's Exhibit 1 at Figure 2, what is Figure 2 describing?
 - A. So this is the hierarchy of the Prodigy or Trintex network.
- Q. And what was the purpose of the file server there in the center?
 - A. Well, it wasn't just a file server. It was actually sort of a file server and the message switch. So on the right-hand side, the sort of cylindrical thing there is storage, and we kept most of the objects that we considered to be production capable or ready or whatever in that storage. And that file server also served as a message switch, a very fast message switch.

And so it would be able to route messages between our reception devices, the concentrators that acted with them, and the gateway systems. The gateways were connections that we had to other providers like American Airlines or Chase Manhattan Bank or Dow Jones or Reuters. A number of other information providers.

- Q. Now, if you look at the bottom, what do we see at the very bottom of the picture?
- At the very bottom, we have the user PCs, the

- 1 reception system, software running to the user PCs.
- 2 Q. Now, looking at the '849 patent, Plaintiff's
- 3 Exhibit 3, how does this patent relate to the problems your
- 4 team solved?
- A. Well, the '849 patent describes the use of the
- 6 advertising context.
- 7 \ Q. And if we look at Figure 3a, which is similar to the
- 8 | '967 patent, how does this relate to the advertising that
- 9 you were talking about?
- 10 A. Well, again, it is showing that the screen area can
- 11 be divvied up and the objects could be directed to the
- 12 various partitions. In this case, there is a partition for
- 13 **ads**.
- 14 \square Q. Now, were the ads always placed in that location in
- 15 | Prodigy?
- 16 A. No, they didn't have to be.
- 17 \ Q. And were applications always of this structure with
- 18 Prodigy?
- 19 A. No, no.
- 20 \ Q. And did there come a time when your team came out
- 21 with a real world example of Prodigy?
- 22 A. Yes. Yes. We, Prodigy went into production at the
- 23 end of 1988. And it rolled out for a number of years,
- 24 reached 2 million households.
- 25 Q. And did Prodigy use the inventions disclosed in the

	Filepp - direct
1	'967 and '849 patent?
2	A. Yes.
3	\mathbb{Q} . Now I want to show you, clipped to your binder what
4	has been marked as Plaintiff's Exhibit 1168. What is
5	Plaintiff's Exhibit 1168, Mr. Filepp?
6	A. One moment. I want to try to find it.
7	Oh. This is a television ad, advertising the
8	Prodigy service.
9	MR. HARRITS: And, Your Honor, I offer
10	Plaintiff's Exhibit No. 1168.
11	THE COURT: Any objection?
12	MR. HADDEN: No, Your Honor.
13	THE COURT: Okay. It's admitted.
14	MR. HARRITS: Permission to publish it to the
15	jury.
16	THE COURT: Yes. Once admitted, you can
17	publish.
18	(Video played.)
19	"A Voice: It makes investing in banking more
20	convenient.
21	"A Voice: Prodigy makes learning more fun.
22	"A Voice: It makes everything more fun.
23	"A Voice: Yeah, lots more fun.
24	"A Voice: It lets me save money on travel.
25	"A Voice: It's like going to the biggest

shopping mall in the world.

"A Voice: Prodigy gives you the news at the touch of a key.

"A Voice: You've got to get this thing.

"A Voice: This is Prodigy, the online service that you access on your home computer over a regular phone line using a modem.

"You can shop for great values, pay bills without writing checks, learn from an online encyclopedia that is updated quarterly, communicate with people all across the country and more, lots more.

For instance:

"A Voice: Prodigy service is great for travel.

It lets you plan it all right from your home computer, books on your own seats from over 300 airlines with Easy SABRE.

And here is the best part. You can book your seat at the lowest available air rate, so you know for sure you are saving money. And the Prodigy service makes booking hotel reservations just as easy.

"You can save up to 50 percent at over 1,500 hotels in the U.S., Canada and Europe. And check the weather before you go. On the Prodigy service, you can get forecasts for 335 cities worldwide, updated continually, for places to eat, things to see, check out the mobile travel guide. If you like to travel, you got to get this thing."

"A Voice: Need another reason why you got to get this thing? Shopping. Listen. If you like to shop, you'd love shopping on the Prodigy service, especially the hundreds of exclusive discounts and special offers available only to Prodigy service members. Buy that special guy a designed, tailored dress shirt. Then send your mom some flowers. In some areas, you can even do your grocery shopping and have groceries delivered right to your door. Take advantage of weekly sales on CDs, tapes, videos and more. Buy china, silverware, even house gifts from over 60 manufacturers at guaranteed lowest prices. And if you need help with the purchase decision, check consumer reports before you start your shopping spree.

"Prodigy, so many great values on so many items right at your fingertips."

BY MR. HARRITS:

- Q. Now, in that video we saw several different what looked to be screens. What were those showing?
- A. They were showing the Prodigy service.
- Q. Now, I'm handing you what has been marked as Defense

 Exhibit 444. Can you please tell us what Defense Exhibit

 444 is?
 - A. I'm sorry. I just need to find it. I think it's marked in incorrectly on my folder.

THE COURT: DX-444.

Filepp - direct 1 THE WITNESS: DX-0004. 2 BY MR. HADDEN: 3 It might be that. This is the Englebardt article; is Ο. 4 that right? 5 This is an article that I guess appeared in the 6 magazine. 7 MR. HARRITS: I offer Defense Exhibit 444. 8 MR. HADDEN: No objection. I don't know if we 9 already did it. 10 THE COURT: I don't know if you did it, but DX-444 is admitted. 11 12 (DX-444 was admitted into evidence.) BY MR. HADDEN: 13 14 Mr. Filepp, can you tell us what this article is 0. 15 describing in the first column? 16 This is an article that describes an interview Yeah. 17 that the journalist had with the family that were Prodigy 18 users. 19 And what was the family's general reception? What Q. 20 does the article say the family's reception was to the 21 Prodigy system? 22 Well, so they had I guess there was a husband, a wife 23 and a kid, I think, and the husband described how easy it 24 was to book flights, because I quess this was important to

him because he did a lot of travel. So he was able to do it

Filepp - direct

- 1 easily and quickly using the Prodigy.
 - Q. If we look at the third page, the column on the right, how else was it described?
 - A. Oh. So the wife said that the Prodigy service --

5 MR. HADDEN: Objection, Your Honor. Hearsay.

THE WITNESS: Excuse me?

THE COURT: You said the document was admitted;

8 | isn't it?

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- 9 MR. HADDEN: Yes, but the reports from the 10 people are not.
- 11 THE COURT: Overruled. You can use the document.
- 13 BY MR. HARRITS:
 - Q. How else was it described, Mr. Filepp?
- A. Well, the wife described the Prodigy service as

 easier to use than their video cassette recorder, their VCR.
- Q. If we turn to the last page of the article, what is this describing?
 - A. Well, this talks about the advertising and the ability that Prodigy gave advertising to see whether I'm were looking at their ads or not. So you could target groups of types of people or demographics, and you can also get feedback whether they were actually looking at this stuff.
 - Q. Mr. Phillip, do you consider Prodigy a success?

Filepp - direct

A. Yes, I think it was ahead of its time. Technically, it sort of turned, I think it sort of turned the whole model of these online services on its head. So where previously applications were primarily run in the central servers and they had to keep track of everything that the user was doing and the terminals were basically stupid terminals or dumb terminals that just served up data and captured key strokes.

So we turned that around because we were able to use PCs. So we put the application logic, the majority of it down in the PC. We actually shipped down and interpreted computer programs that were embedded in our objects so that they could execute locally and off-load our main servers and provide a better response experience to the users as well as doing all this object caching and storage stuff.

- Q. At Prodigy's peek, how many users did it have?
- A. It had about 2 million, and that was -- so Prodigy, I think another reason why it was a success or another way it was a success was as a sort of an entry for regular people to start using PCs because there wasn't really a whole lot of people to use PCs. They used them for spreadsheets sometimes and they used them for word processing, but, you know, this introduced them to this whole online world that, you know, now has become completely prevalent but at the time wasn't.
- Q. And did IBM and Sears eventually sell the Prodigy as

Case 1:16 cv-00122-LPS Document 408 Filed 09/18/18 Page 76 of 279 PageID #: 19006 Filepp - direct 1 a company? 2 Yes. It was sold to International Wireless, I 3 believe. 4 Do you know when that was? 0. 5 1996. Α. 6 And did IBM retain the patent rights for the patents 7 that are at issue in this case? 8 Α. Yes, they did. 9 MR. HARRITS: Your Honor I'd like to mark a 10 demonstrative, Plaintiff's Demonstrative Exhibit 2. 11 THE COURT: Okay. 12 MR. HARRITS: I have no more questions. 13 THE COURT: Okay. Thank you. 14 Cross-examination. 15 MR. HADDEN: Hello, Mr. Filepp. My name is 16 David Hadden. I represent Groupon. 17 May I approach, Your Honor? 18 THE COURT: You may approach. 19 I bear gifts. MR. HADDEN:

(Binders passed forward.)

that binder. We won't use all of it.

(Counsel confer.)

Let me ask you Mr. Filepp, I'm sorry for the sides of

THE COURT: Mr. Filepp, you can use the counter

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BY MR. HADDEN:

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Case 1:16-cv-00122-LPS Document 408 Filed 09/18/18 Page 77 of 279 PageID #: 19007
                                  Filepp - cross
    1
          to your left, too, if you need more space.
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                      THE WITNESS:
                                     This?
     3
                      THE COURT: Yes.
                      THE WITNESS: Thank you. What I need is my
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     5
          bifocals.
     6
                      THE COURT: You can have the screen near you and
    7
          the big screen and the books. So if you can't see
    8
          something, please let us know.
    9
                      THE WITNESS: Thank you.
   10
                                CROSS-EXAMINATION
          BY MR. HADDEN:
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                 I'll ask you to look, sir, at Defendant's Exhibit 16.
   12
                      THE COURT: In the white binder? In the white
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   14
         binder?
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                      MR. HADDEN: Yes, Your Honor.
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          BY MR. HADDEN:
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                 It's is the Trintex Object Architecture documents.
          Q.
          Can you find it, sir?
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   19
                 Yes.
          Α.
   20
          Q.
                 Okay. Thank you.
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It's a little hard for me to hear you.

Do you recognize Defendant's Exhibit 16, sir?

I will speak up.

Sure.

Yes, I do.

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Α.

Q.

Α.

Q.

Α.

Filepp - cross 1 MR. HADDEN: I move Defendant's 16 into 2 evidence, Your Honor. 3 MR. DESMARAIS: No objection. 4 THE COURT: Okay. It's admitted. 5 (DX-16 was admitted into evidence.) 6 BY MR. HADDEN: 7 And this I think, sir, is a later version of the document you talked about with IBM's counsel; is that 8 9 correct? 10 That's right. Α. 11 Q. So you wrote this version, too? 12 Α. Yes. 13 Okay. And this one is dated January 4, 1988; is that 14 correct? 15 Α. That's what it says. 16 And that was around the time that the '967 and '849 17 patents were originally filed; is that correct? 18 I would have to refer back to them to see when they Α. 19 were filed. I don't recall off the top of my head. 20 And when did Prodigy launch? Q. 21 Α. Prodigy launched in the 10th of '88, I believe. 22 Now, if you look on the first page of this document 23 with the heading Preface. Do you see that, sir? 24 If we could just blow up this paragraph.

And it begins by saying: It has been the

additional approach within the videotex industry to use the full-screen frame as the basic addressable display unit.

Do you see that?

A. I do.

- Q. Is that describing what you were talking about with IBM's counsel that videotex would send out a full screen at a time?
- A. Well, so videotex I believe was not -- I don't know that there was an absolute definition of what that was, but in terms of the information services that were being provided to households, then, yes, this describes the dumb terminal full screen frame.
 - MR. HADDEN: And if you go to the next paragraph, Brian.
- 15 BY MR. HADDEN:
 - Q. It says Trintex also proposes -- oh, sorry. I moved too fast.

And that sentence says: Trintex intends to depart from this method by segmenting the full screen into a variable number of addressable partitions.

Do you see that?

- A. Yes. Yes. We divide up the real estate on the screen into partitions into which we can direct objects.
- Q. So that is an accurate description of the idea you were talking about with the monsters here?

- 1 A. Yeah, basically.
- Q. And when you talk about the real estate on the screen, you are talking about the area on the user's screen on their PC computer?
- A. Well, actually to go back to your previous question,
 with the monsters. The concept with the monsters was pretty
 much the slicing up of the data into objects that are
 reusable to -- and what this is talking about is it is
 talking about how you can sort of slice up the display so
 you can take those objects and direct them into partitions.
 - Q. Okay. So just to be clear, the sentence that is up on the screen now is talking about dividing up the screen on the user's computer; right?
 - A. Yes, you could. Right.

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- Q. And not just that you could but that is what you did in Prodigy; right?
 - A. Yeah, essentially. Of course, you could have a screen be one partition if you wanted to, in which case it would be full screen again.
 - Q. Right. So if you went back to the full screen being one partition, you would just be back in videotex where you would be sending down one screen at a time?
 - A. Well, again, I'm not sure what you mean by videotex.

 So my understanding of videotex in general was that videotex was essentially set-top boxes that were provided to act as

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Case 1:16 cv-00122-LPS Document 408 Filed 09/18/18 Page 81 of 279 PageID #: 19011
                                  Filepp - cross
    1
          controllers that would use people's televisions to display
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          information services. So like Bill Screen Text in Germany
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          did that.
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                      THE COURT: I'm sorry. You trailed off there.
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          Can you repeat what you just said?
     6
                 I'm not sure.
          Α.
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                      THE COURT: That's fine. Just be careful if you
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          want us to hear it, that you keep saying it toward the
    9
          microphone.
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                      THE WITNESS: I'm sorry.
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                      THE COURT REPORTER: I'm sorry. What company in
   12
          Germany?
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                      THE WITNESS: Bill Screen Text, which means like
   14
          TV screen text.
   15
          BY MR. HADDEN:
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                 Could you move forward to Bates No. 141, page 7 of
   17
          the document, sir?
   18
          Α.
                 Page 141.
   19
                 Yes, it's page 7 of the original document on the
          Q.
   20
         bottom.
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And if you look at the paragraph just above the

It says the object architecture imposes a view

Can we blow that up, Brian?

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Q.

picture.

Yes.

of the display screen as being a composite of separately addressable partitions.

Do you see that?

A. I do.

- Q. And is that describing dividing up the screen on the user's computer that you talked about?
- A. Yes. It's describing the dividing up of the display area. And then later on, it says that it takes advantage of the reception systems plus the objects that it needs to assemble into the area.
- Q. Okay. And if you look at the next part of that sentence, it says: into which data will be mapped.

Does that mean that the data that would be displayed would be mapped into one of these areas in the user's screen?

- A. Generally, some data, the data that has tended to be displayed is mapped into the screen area. But, of course, the objects we shut down don't just contain display data, they contain other things like programs and they may contain other objects.
- Q. Sure. And this sentence continues. It says: the locations and sizes of these partitions are defined by the producers of the videotex material.

Do you see that?

A. Yeah. That is what I have here.

display screen. Does this show the slicing up of the screen

- Q. And there is a figure underneath this that shows the
- on the user's computer that you talked about?
- 4 A. Yeah. It basically is an example of, kind of an
- 5 instructive example tending to show, take this display space
- 6 and slice and dice it into various things.
- 7 | Q. If you look forward in that same document, it's Bates
- 8 No. 162.

- 9 A. I'm sorry. Which page?
- 10 **Q.** 162.
- 11 A. 62?
- 12 Q. 162, with the heading Partitioning the Screen.
- 13 | A. Yes.
- 14 Q. Did you find that, sir?
- 15 A. Yes, I see it.
- 16 \ Q. Okay. And the first sentence under this heading
- says: Page Format Objects will be used to segment the full
- 18 screen display.
- 19 | Can you highlight that, Brian?
- 20 | Full screen display units into addressable
- 21 partitions. Do you see that?
- 22 A. Yes.
- 23 Q. So are the Page Format Objects what define the areas
- on the user's screen?
- 25 A. Yes.

- Q. And it goes on and it says that: Page Format Objects contain the origin, and then (drawing point). Do you see that?
- A. Yes, that's because the data could be, the object data could be relocatable so it needs to have a place to start. Relocatable means you can have the same picture show up in different places but it has to be to have a place where it begins.
 - Q. That wasn't the question, so please listen to the question. The question was do you see that? Do you see (drawing point)?
- 12 A. Yes, and origin point.

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- Q. And it goes on: and dimensions are each defined partition. Do you see that?
- 15 A. Yes, of the viewable area of that partition.
- Q. So that is describing the size and location of the areas on the user's screen after it is divided up; right?
- 18 A. It describes dividing it up.
- Q. Right. And if we go down in this document, it pictures that; right?
- 21 A. I'm sorry.
- MR. HADDEN: You need to slide down, Brian.
- 23 BY MR. HADDEN:
- Q. If you look down on that same page, there is a picture is showing that, location 1?

- 1 A. Yes, there is an example of how it might look.
- Q. And so this is basically a diagram on the user's screen, right?
- A. It's an example of the use of origin points and sizes and a variety of partitions.
 - Q. So there are partitions that are labeled A-B-C-D-E; right?
- 8 A. Um-hmm.

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- Q. And each of those partitions has an origin; right?
- A. Yes. Yes. They have the origin point is, I guess it was like televisions. In the lower left, I'm not sure, but at any rate, yes, the origin point is like an X/Y from geometry.
 - Q. Right. So the origin would be the lower left corner and the dimension would be the upper right corner; right?
 - A. Right. Of the viewable, of the viewable area for that portion of the display.
 - Q. So on the user's screen, each of these partitions would be a rectangle with a fixed size and location; right?
 - A. The partitions would, yes. The data that goes in would not.
- 22 | Q. I'm just talking about the partition here.

And if you look on this same page, 162, the bottom paragraph right above the diagram, it says: It is anticipated that for launch, only a limited quantity of Page

1 Format Objects will be defined.

Do you see that?

A. I do.

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- Q. Is that true?
- 5 A. Is it true that that is what is stated there? Yes.
- 6 Is it true that that is what happened at launch, I really
- 7 have no idea.
- 8 Q. But the plan at least in 1988 when you had this
- 9 document was to launch at least with the limited quantity of
- 10 these Page Format Objects; right?
- 11 A. Well, the data on this portion of the document is
- 12 | actually from 1987, even though the title page is from 1988.
- 13 So I'm not quite sure why we had that discrepancy between
- 14 | the dates. So actually if I look at the content here of all
- 15 the content here, all the pages are dated, we have ones we
- 16 | leafed through just now are dated July of '87 so they're not
- actually from '88 even though the title page is from '88.
- 18 So this is talking about what -- it's speculating about what
- 19 would happen in the launch over a year after -- a year
- 20 before the launch.
- 21 \ Q. So just to be clear, IBM produced this document. So
- 22 | my question is do you have any reason to think that it is
- 23 described here on this document that IBM produced did not
- 24 describe your plans for launch in 1988?
- 25 A. What I'm saying is that in the first place in January

of '88, I wouldn't know what we're going to launch in the
first place. In July of '87, I wouldn't have known. The
content inside this document is from July of '87. This is
in black and white.

- Q. Okay. So do you know whether, when Prodigy launched, there was a limited quantity of Page Format Objects that were defined?
- 8 A. I actually don't know.
 - Q. This goes on and says: These will, whenever possible, be staged at the reception system. Do you see that?
- 12 | A. Yes, I do.

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- 2. So the staging was what you were talking about earlier was the more permanent storage. It's the user computer; is that right?
 - A. Yeah, yeah. The idea was to, when you have really data that doesn't change very much, that is going to be used frequently on the user system, so it is available quickly.
 - Q. And when this is talking about staging on the user's system, it's basically the blueprint for how the screen is going to get divided up; right? That is the page format object; right?
 - A. It's the layout that can be used by applications for divvying or various things for divvying up the screen real estate.

Filepp - cross

Q. Right. So the idea you describing here is that there will just be a handful of ways in which the user screen will be divided up into these rectangular areas so you are going to save those descriptions at the user's computer; right?

A. Well, what I'm saying here is that what I expected at the time that I wrote this, which was in July of '87, that we would probably have a limited number of them, if we wanted to stage them, but not restrict them to any particular number, then you could have as many as you want. But it was what I was thinking I was probably going to do.

- Q. And these Page Format Objects which define rectangular areas in which the user's screen was going to be divided, those were the objects that generated partitions on the user's screen; right?
- A. I'm sorry. Would you repeat that, please?
- Q. Sure. The Page Format Objects that you are describing in this document here, those are the objects that divide the user's screen up into these rectangular regions; correct?
- A. Yes, yes. Page Format Objects.
- Q. So if you staged those, those would be the objects that would be stored at the user's computer that would define the partitions; right?
- A. If you stage those objects, then those objects would be available on the user's computer, if they're requested.

So Page Format Objects were I think requested by Page Template Objects.

So Page Format Objects could be requested, through. If they were found locally, then they would be used by local storage. If they are not found locally, they'll be requested from the network.

MR. HADDEN: Can we go up one line.

BY MR. HADDEN:

- Q. On the same page, it talks about: Page Format

 Objects must be referenced whenever non-window data is to be displayed in order to ensure a consistent presentation of the page.
 - Do you see that?
- A. I do see that.
 - Q. Why were Page Format Objects required to ensure consistent presentation of the page?
 - A. Why were they required? Well, because they described divvying up the screen so the distinction between the rest of the presentation data and the window data was the date windows would popup and the transient things would go away. And the page that you see, that is more, that is more of what you asked for initially, that area would be divided up into viewable portions which were rectangles and those rectangles were described by the partitions. So the viewable data, of course, is -- the viewable area is the

viewable area. So you had multiple viewable areas. It's

like, like in my living room, I have a picture window that

has a bunch of panes in it, so this is sort of like the

panes of a picture window.

- Q. Right. And it goes on and kind of makes that the analogy, it says the use of page format objects assures proper tesselation or tiling of the displayed partitions; right?
- A. Right.

- Q. So that means that all these rectangles that are divided, that divides the user screen, they fit together like tiles so the screen is completely covered?
- A. Yes. So it's like the panes of my living room window so that the viewable portions are like panes, which doesn't limit the great outdoors to even like little rectangles, the great outdoors is the great outdoors and I can see that from any window, but that is the viewable space.

THE COURT: One of you have to talk at a time. Were you done with your answer.

THE WITNESS: I'm sorry, I want to clarify by great outdoors the analogy would be the content.

Q. Thank you. Let me ask you to turn forward to page 166 which is also page 32 in the same document, sir. If you look, I think this is talking about something you just mentioned which is I guess it's the fourth paragraph in the

bottom, it says the page template defines the candidate

objects and rules for selecting objects for display. Do you

see that?

- A. I'm sorry, the question?
- 5 Q. Do you see that?

- 6 A. Yes, I see that.
- Q. And so for every page that you would get in Prodigy and a page in Prodigy was a screen and information; right?
- 9 A. Yes, it was a screen and potentially lots of pieces
 10 of information, yeah.
- 11 Q. And each of those screens would be associated with a page template; right?
- A. Yeah. Well, the page template is the entry point into the viewing experience if you will.
- Q. And the page template would reference a page format object; right?
- 17 A. Yes.
- Q. And the page format object would as said divide the user screen up into these rectangular areas; right?
- 20 A. That is right.
- 21 Q. And then the page template it says here, we go down
 22 two paragraphs, relates candidate displayable objects to
 23 specific partitions. Do you see that?
- 24 A. Uh-huh. Yes.
- 25 Q. And what that means is the information that may be

displayed on that page is essentially mapped to one of these rectangular areas on the user screen; right?

A. Yes.

- Q. And if you look at the last paragraph here, it says in short the page template object provides a recipe for the assembly and processing of a Videotex page and its contents.

 Do you see that?
 - A. Yes. And that was back at a time when I was unclear as to what -- actually I still am unclear as to what Videotex is as compared to anything else, so yes.
 - Q. But the idea was you would take the page template object, when it referred to these rectangular divisions or partitions of the user screen, it would find the information that's supposed to be displayed in each of those rectangles, put it in there and then at the end you would have essentially a screen of Videotex; right?
 - A. No, you would have a screen of an online server. So I don't make a good distinction between Videotex and online service in this document, I'm afraid, but nevertheless, you have the screen for an online server and that was the reception system according to the recipe of the page template object, but in addition to the recipe of the page template object, if there would be likely programs that were -- had been pulled down as part of the objects that would be running that would also call for data to be pulled

into the, and displayed to the user potentially.

- Q. Did you finish with the answer?
- 3 A. I'm sorry.

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- Q. Are you finished?
- 5 A. Yeah, I guess so.
- Q. Let me ask you to move forward in the same document to page 177.
- 8 A. Sure.
- 9 Q. And there is a heading, it might be helpful
 10 presentation data segment, do you see that? Did you find
 11 it, sir?
- 12 A. Yeah.
- Q. And the first sentence under that sentence
 presentation data segments contain the actual data to be
 displayed or otherwise presented to the viewer. Do you see
 that?
- 17 A. I do see that, yeah.
 - Q. So the presentation data segments would be the information that would be fit into one of these rectangular areas in the user screen?
 - A. It wouldn't necessarily have to fit, but it would be information that would be displayed in one of those rectangular areas, yeah.
- Q. If you look at the heading size there, do you see that?

1 | A. I do.

- Q. It says there a NAPLPS operand which defines the upper right point of the display data, (three bytes). Do you see that?
- 5 A. Yes.
- Q. That is defining the upper right corner of another one of these rectangles; right?
- A. That could be used for defining the upper right corner of the rectangle.
 - Q. What this is saying is the presentation data, the actual graphics or text is going to be shown in one of these rectangular areas on the user screen is also going to have a rectangular area in size that is going to fit in that area; right?
 - A. No, it doesn't necessarily have to fit in the area. It can be bigger than the area or it can be smaller than the area. And there are two different types of presentation data that we're talking about here, some NAPLAS, the North American Presentation Level Protocol Syntax, which is a very compact way of conveying information, control information and display information. It can include text, text data, it can include incremental point images, and it can be -- it can be scrollable.

And then the other type of data that we have here is ASCII data, ASCII is ASCII text, we have encoding

text, and again, the size here actually probably doesn't have any relevance in that case.

- Q. Are you done with your answer, sir? Are you done?
- 4 | A. Yes.

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- Now, the original mechanism when Prodigy launched,
 the object was to be displayed within the partition had to
 be delivered to the reception system in such a way that it
 fell within the constraints. Is that true?
 - A. No. No. The object that was sent to the reception system and processed by the reception system, like I described before, we have these essentially panes, right, in a window, and when I look out my window I see my front yard and my front yard isn't constrained by any panes. My front yard is a lot bigger than a pane. So the pane is saying here are a bunch of panes, here is a bunch of pictures of the front yard and here are the portions that are viewable to me at this time.
 - Q. Do you remember when you deposed in the Priceline case, sir?
 - A. Not really, but I'll try to remember.
 - Q. This is page 95, lines 2 through 9 of the Priceline deposition.
- THE COURT: Is the hard copy in his binder?

 MR. HADDEN: It should be.
- 25 | "Answer: A leader adds partition that had --"

THE COURT: Wait a minute. Can you direct us to page 95.

MR. HADDEN: 95, lines 2 through 9.

THE COURT: 2 through 9?

MR. HADDEN: Yes, Your Honor.

THE COURT: Any objection?

MR. HARRITS: No, Your Honor.

THE COURT: You can play it when you're ready.

- Q. Okay. We'll move on. Let me ask you to turn to Plaintiff's Exhibit 1, of the '967 patent. And your counsel provided that to you, but it's also in the binder, the '967 patent, it should be PX-1.
- A. Is there any particular page?
 - Q. Start with the abstract, if you would, sir. If you look, maybe the second sentence of the abstract it starts, "Steps are provided." Do you see that?

And it says, "Steps are provided for generating the application displayed to screens having a plurality of partitions."

Do you see that?

A. I do.

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- Q. And those partitions are those rectangular regions that we saw in the object architecture document we were just looking at; right?
- 25 A. **Yes**.

- Q. And it goes on and says the partitions being constructed from reusable elements. Do you see that?
- 3 A. I do.
- Q. Those are those page format objects that we saw in the document; right?
- A. No, they're actually the plurality of objects in the system, so it's not restricted to page format objects.
 - Q. But the page format objects are what define a partition to use the screen?
- 10 A. Yes.

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- Q. When this says the partitions being constructed from reusable objects, it's referring to those page format objects as the reusable objects?
- A. I guess the quibble that I have when I see the word constructed is that the page format objects are used to essentially define the partitions and then they're constructed from the contents that's directed into those partitions, so from all the other objects and data that flows into those partitions.
- Q. And it goes on and says, "In accord with the method, the screens include at least a first partition at which an application may be presented."

Do you see that?

- 24 A. Yes.
- 25 Q. So there has to be one of these rectangular regions

in which the application, which is the information that the user is asking, like news or weather as you showed in your example with your attorney; right?

- A. Well, you have to have at least one. You can have more. But you have to have at least one.
- Q. And then it says, "And second, concurrently displayed partition including command functions for managing the display."

Do you see that?

A. Yes, we have a command bar.

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- Q. There was an another rectangular region of the screen that had a command bar that would allow them to manage the display?
 - A. That would allow them to navigate through the service and go to different types of applications and that kind of thing.
 - Q. If we look at figure 9 from Plaintiff's Exhibit 1, there is an element 502. Can you blow that up or highlight that, please, Brian. And it represents the page format object; right?
 - A. Yes, it does.
- Q. And that is the reusable object that defines how the user screen is divided into these rectangles; right?
- 24 A. Yeah, on all these objects.
- 25 Q. And it specifies in that object 502 that it defines

1 the screen partitions, locations and sizes.

A. Yes, it does.

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- Q. So that is specifying the origin and dimension that
 we saw in the other document, that is the lower left-hand
 corner and the upper right-hand corner of those rectangular
- 6 regions of the screen?
- A. Yes, it describes dividing up the viewable areas of the screen.
 - Q. If you look at column 11, line 40 through 44 of this patent. Before I get there, the same column --
- 11 A. I'm sorry.
- Q. Sorry. One second. Yeah, column 11, line 40. It says, "Page element objects 504 on the other hand are structured to contain the display data; i.e., text and graphic, to be displayed which is mapped within the screen partitions 250 to 290."

Do you see that?

- A. I see that that's part of what the page element objects contain.
- Q. So the page element objects contain the text and graphics that is put into one of these predefined screen partitions; right?
- A. Well, page element objects contain that plus program information plus definitions plus all sorts of things.
 - Q. I'm just focusing on what the user sees on the

screen. So from what a user sees on the screen, if they're going to see some text or picture that is going to be part of this page element object; right?

- A. Yes and no. So there may be text and graphics in the page element object that may be displayed right away to the user, there may also be programs that are going to be executed that may, for example, go out to American Airlines and ask for the current flight schedules for San Francisco and pull those down and display them inside the display area.
- Q. What your patent says is that page element objects contain the display data, right, text and graphics, isn't that what it says?
- A. It don't stop there, it says, "And further provide the associated control data and programs."
- Q. Sure.

- A. So then there is a perfect description of some of them.
- Q. The point I'm trying to understand is that the page element object contains the text and graphics that will be put into one of these screen partitions; right?
- A. The page element objects can contain text and graphics to be put within screen partitions, or they cannot contain text and graphics but can contain just references to fields and programs, or they can contain text and graphics

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Filepp - cross 1 and programs. They can contain a variety of things in 2 different combinations. 3 Ο. Now, page --THE COURT: Mr. Hadden, I'm going to stop you 5 there for a moment and let the jury have a break for the morning. No talking about the case. And we'll bring you 6 7 back shortly. (Jury exited the courtroom at 11:05 a.m.) 9 THE COURT: We'll be in recess. (A brief recess was taken.) THE COURT: Bring the jury back in. (Jury entering the courtroom at 11:21 a.m.) 13 THE COURT: Welcome back. We are ready to proceed. Mr. Hadden. 16 MR. HADDEN: Thank you, Your Honor. 17 BY MR. HADDEN: Mr. Filepp, turn now to Defendant's Exhibit 16 and 19 the Trintex object architecture document that you read. You 20 read that document to describe the system that Trintex was trying to build; correct? 21 22 Yeah, generally. Α. 23 And you wrote that document so that engineers at

Trintex could implement the system; right?

Yes, so they would have a common understanding of

1 what to work towards.

- Q. And the words you chose in that document to tell those engineers what to implement mattered, didn't it?
- A. Did what?
- 5 Q. Mattered?

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- A. Well, it mattered to some extent. What probably mattered more was the concept.
- 9 patent. And let's look at figure 2 which I think your
 10 counsel also put up. Now, figure 2 you talked about this
 11 file server in the middle, and there was this cylindrical
 12 icon for a database next to it, next to the number 200. Do
 13 you see that?
 - A. Yes, I see it.
 - Q. And everything that a user as you testified I think in the production system of Prodigy could access would come out of that database; right?
 - A. Actually, no. So the store of objects that we created that were ready for production which are objects of the data that's formatted according to these formats that was stored in a central repository. And then distributed through the network as it went along. However, we have other types of data also that went through the network. We have something called messages which are also described in the patents. And those messages, for example, might be

Filepp - cross

requests from the reception system up through that thing that we call file server in this picture here, but it's actually a very fast message switch. It's a transaction processing facility was the operating system was something that came out of the old Saber system, actually, but anyhow, messages could be routed very quickly through there out to the gateway systems, for example, and gateway systems were ways to connect to other company's networks and access their data so that we could pull data for things like airline reservations and banking, find out what your bank statement is and stuff like that.

- Q. Sure. But all of the objects that you talked about, like with your monsters here that were information, graphics or texts, the user would see on their screen came out of that production database; right?
- A. The objects were -- came out of that -- well, objects were produced in a producer system shown in the number 120 and then as they were released in production they would be pushed down into that cylindrical shape. So the objects would be used to request data which could, and the objects could contain displayable data, but they could also contain programs that would be executed on a reception device to make queries out through the gateways and pull data back for display on the reception device, so the objects were not the sole source of displayable data on the reception device.

Q. Isn't it true there was a producer system database that held all of the objects that could be sent out to users?

- A. I'm sorry, could you repeat that, please?
- Q. Isn't it true that there was a producer system database that held all of the objects that could be sent out to users?
 - A. The producer system -- so the producer systems were the systems that were used by our content creators, by our artists and editors to be able to create pictures and to be able to create text and things like that and then to package those things into objects and so there was a big repository of this stuff that was kept as work in progress.

And then as particular items were deemed production ready, then they would be pushed from the producer system into this file server thing in the middle.

- Q. So it's a yes or no question, sir.
- 18 A. The producer --

19 THE COURT: Let him ask the question.

THE WITNESS: Excuse me.

- Q. There was a producer system database that held all of the objects that could be sent out to users, yes or no?
- A. No, the producer system database was not accessible to users directly.
- Q. Could we have 58. This is from your deposition in

this case, page 50 lines 15 to 18.

"Question: So there was a producer system database that held all of the objects that could be sent out to users?

"Answer: Yes."

Is that you.

A. Yeah. Yeah. And what I said is that they could be sent out to users, but not that they were, what's directly accessible to users. The users, they weren't directly accessible, they have to go through the file server.

THE COURT: Mr. Hadden, I'm glad the deposition thing is working, but you need to pause so counsel and I can look at it and determine if there is an objection.

MR. HADDEN: Sorry, Your Honor.

BY MR. HADDEN:

- Q. That database that we see there, 200, that talks about the file server, the file server you talk about, that would be the mother ship that all of these reception systems would ultimately talk to get the information out of that database; right?
- A. Yes, that's not the producer system database, the producer system database is above that in the producer system. So that was the TDF layer, TDF repository.
- Q. A repository which is that cylinder; right?
- 25 A. Yes.

Q. So when the users wanted to get graphics or an application, that information would all come down from -- through the Prodigy network, from that database and through that file server; correct?

- A. I'm sorry, are you suggesting that the data is coming through the producer system into the repository that's associated with the file server?
- Q. No, sir, that wasn't my question.

You have the file server and ultimately all the information that ends up on those user terminals comes from that file server down through the Prodigy network to those user's computers; right?

- A. Yeah. But -- yes and no because it's pulled, it's actually requested from below. So the reception -- so if the data can be found in any other location earlier in the network, then it's pulled from there, or you know, retrieved from there. And the final recourse is to go into the more central repository.
- Q. And that network that connected that file server to the users computer, that wasn't the internet in 1988 when you launched Prodigy, was it?
- A. The internet, no, it wasn't the internet. The internet was the joint venture of the defense department and some universities that was created in 1969.
- Q. So Prodigy didn't run on the internet, then?

Filepp - redirect

- A. No, it ran on a network. It had a network that connected to other networks, however, that wasn't what was
- 3 | traditionally --
- Q. That was a yes or no question. Prodigy did not run on the internet when it launched in 1988; correct?
- 6 A. No, not in '88, no.
- Q. And you said that Prodigy was a success. Wasn't
- 8 Prodigy shut down in 1997?
- 9 A. No, I don't think so.
- 10 Q. Well, weren't you laid off in 1997?
- 11 A. Sure, I was laid off.
- MR. HADDEN: No further questions.
- 13 THE COURT: Okay. Redirect.
- 14 MR. HARRITS: May I proceed, Your Honor?
- 15 THE COURT: Please.

16 REDIRECT EXAMINATION

- 17 BY MR. HARRITS:
- Q. Hello again, Mr. Filepp. Counsel just mentioned that you were laid off. Was that before or after IBM sold its
- 20 stake in Prodigy?
- 21 A. That was after IBM sold to International Wireless.
- 22 | Q. And then IBM hired you back again; right?
- 23 A. IBM did hire me back again, yes.
- Q. Now, I want to direct your attention to Plaintiff's
- 25 Exhibit 36, and specifically I would like to direct your

Filepp - redirect

attention to page 62. Sorry, technical difficulties on my
side trying to bring it up.

Are you there, Mr. Filepp?

A. Yes.

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- Q. And when we look at the top of this, what is this discussing?
- 7 A. This talks about how to handle text in a field.
- 8 \ Q. And how does it describe handling text in that field?
 - A. Well, it talks about where -- how text can be positioned into a field and how it can be -- how much text should be shown of a given the text buffer and how it can be scrolled.
- Q. And now I want to talk about, remember when counsel
 was talking about partitioning the screen and all of that
 during your cross?
- 16 A. Yes.
- 17 Q. I want to talk about operating systems that existed before Prodigy launched. When did the Microsoft Windows system launch?
- 20 A. I think it came out around '87 or '88, something like that.
- 22 \ \Q. And did Prodigy work on the Windows system?
- 23 A. Initially we targeted -- well, eventually it did.
- Eventually it worked on Windows system, but we eventually targeted it to run on DOS, Microsoft DOS which was before

Filepp - redirect

1	Windows. But, yes, we certainly ran on a disk.
2	MR. HARRITS: No further questions, Your Honor.
3	THE COURT: Okay. Thank you. You can step
4	down, Mr. Filepp.
5	Mr. Harrits, why don't you retrieve the
6	documents and binders here.
7	MR. HARRITS: I'll take care of it for you.
8	THE WITNESS: Thank you.
9	THE COURT: Thank you, Mr. Filepp.
10	You may call your next witness.
11	MR. DESMARAIS: Thank you, Your Honor. IBM's
12	next witness is Dr. Hinton, the inventor of the account
13	creation single-sign-on patent, which she will tell the
14	inventory story about that patent, and that relates to
15	Bedrock Fact No. 1. And my colleague Laurie Stempler will
16	do the, exam if that is okay, Your Honor.
17	THE COURT: That is okay. Yes.
18	DR. HEATHER HINTON, having been first duly
19	sworn, was examined and testified as follows
20	THE COURT: Good morning, Dr. Hinton.
21	Welcome.
22	THE WITNESS: Thank you.
23	THE COURT: Ms. Stempler, you may proceed when
24	you are ready.
25	MS. STEMPLER: Thank you, Your Honor.

1 DIRECT EXAMINATION 2 BY MS. STEMPLER: 3 Good morning, Dr. Hinton. Q. 4 Good morning. Α. 5 Can you tell the jury what you do for a living? Q. 6 My title is Hybrid Cloud Chief Information Security Α. 7 Officer. 8 And what does that mean? 9 It means that for our hybrid cloud business unit, I 10 have day-to-day responsibilities for the security and compliance of our offerings in the infrastructure in which 11 12 they run. 13 Where do you work? Q. 14 Α. I work at IBM. 15 Why are you here to testify today? Q. 16 I am one of the inventors of the '346 patent. Α. 17 MS. STEMPLER: I have some exhibits for us to 18 look at this morning. May I approach, Your Honor? 19 THE COURT: You may. 20 (Documents passed forward.) 21 BY MS. STEMPLER: 22 Dr. Hinton, where do you live? Q. 23 I live in Austin, Texas. Α. 24 And where are you from? Q.

I am from Canada.

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- Q. In your binder there, there are some slides labeled Plaintiff's Demonstrative 3, 1 through 9. Do you see those?
- 3 A. Yes, I do.

- Q. And will they relate to your testimony today?
- 5 A. Yes, they will.
- 6 Q. So let's take a look at your slides. This is Slide
- 7 No. 2. Can you tell us about your education, please?
- 8 A. I have a Bachelor of Applied Scenes, a Master's of
- 9 Applied Science, and a Ph.D. in Computer and Electrical
- 10 Engineering from the University of Toronto.
- 11 Q. And did you go straight through to get your degrees?
- 12 A. No, I left after my bachelor's degree and worked for
- several years.
- 14 \ Q. What did you do during those years?
- 15 A. I was a consultant with Andersen Consulting.
- 16 \ \Q. And what was the nature of your work at Andersen?
- 17 A. Well, I was a junior consultant so I did everything.
- 18 I started the photocopier. By the time I left, I was one of
- 19 the local experts in the SAP software system.
- 20 Q. So how long were you there?
- 21 A. A good two and-a-half years.
- 22 \ Q. And what did you do after that?
- 23 A. I went back to school to do graduate studies.
- Q. How did your work at Andersen relate to your decision
- 25 to go back to school for?

A. I had been contemplating in going back and getting a graduate degree and just doing more studying. But some of what I saw there, just how people were using computer systems and some incidents we had with people who did things that they weren't supposed to, some people with mal intent and some people just completely innocently with terrible consequences reaffirmed my desire to spend more time with computer security.

- Q. So when you went back to get your Ph.D., did you write a thesis?
- A. I did.

- Q. What was that thesis about?
- A. One of the things that was a big problem for us at the time was that we were starting to connect, interconnect computers. And we would take two computers and we would look at each one of them on their own and we say we know they're secure on their own, but when we interconnect them something happens and they're not secure anymore. They do things that we didn't expect them to do.

So what I was looking at was trying to define what would happen when we interconnected them, because we knew what it was that was causing the security to break. We could fix that by either fixing those computers so they wouldn't break or putting in, we would call them controls, other things that when they worked together, we knew they

would stay secure. And we called that composability. It's just a fancy way of saying kind of like interconnecting or putting together.

- Q. And did your interest in computer security continue after education?
- A. I have been doing computer security ever since.
- Q. All right. So what did you do after you got your Ph.D.?
- A. I took a tenure teaching position at the Ryerson

 Polytechnic University in Toronto. It's about a 20 minute

 walk down the road from the University of Toronto.
- 12 Q. I see it also says you are an adjunct professor at the University of Toronto as well?
- 14 A. Yes.

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- 15 Q. And how long were you teaching?
- 16 A. About four and-a-half years.
- 17 \ Q. What was the nature of the courses that you taught?
- taught undergraduate courses there, everything from Intro to
 Computing, so computer practices, programming, parallel

So Ryerson was an undergraduate university only so I

- programming. Again, I was the junior person so I taught
 everything. And at the University of Toronto, I had
- graduate students. So I had some master students, Ph.D.
- 24 students, and then I taught graduate courses.
- 25 Q. What did you do after you taught?

A. So about 1999, it was the dot com boom, and all of my friend were going into Industry, so I decided to kind of join them and seek fame and fortune. And I joined a company that IBM was in the purchase of buying -- or in the process of buying. Sorry.

- Q. Is that how you started at IBM?
- 7 A. Yes, it is.
- 8 \ Q. Have you been at IBM ever since?
- 9 A. I have.

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- 2. So taking a look on the right-hand side of the slides, can you tell us about some of the awards you received while you have been at IBM?
 - A. Sure. So I have an appointment. It's called

 Distinguished Engineer. It's something that is recognized

 by my peers, and it's an executive appointment that is a

 recognition of continued sustained technical contribution to

 the company.
- Q. And what about the Outstanding Technical Achievement?

 What was that for?
 - A. So that was for contribution to what is called web services security, but all of this stuff that led up to things like federated single-sign-on.
 - Q. And then on the bottom, it says selected for Corporate Service Corp. What is the Corporate Service Corp.?

A. The Corporate Service Corp. is this really cool thing that IBM runs. It's kind of like the Peace Corp. meets business. So we go to work with communities. I went Da Nang, Vietnam, and we worked with small businesses there and the Chamber of Commerce on how to help them build this businesses by using technology and adopting computer strategies.

- Q. And did you enjoy your work in that program?
- 9 A. I really did.

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- Q. How many times did you do this?
 - I liked it so much I'm actually the first person at Α. IBM to do this twice. I did it as a Corporate Service Corp. before I became an executive, and then they have another version called Executive Service Corp. and I applied and got in for Executive Service Corp., and there I went to Accra, Ghana and I worked with -- it's a team, it wasn't just me by myself. We worked with the mayor of Accra on some really projects to use smartphones for micro payments for -- I did this for payments for people in the market, for vendors in the market. They would pay like a penny a week rent for a stall. And collecting a penny a week is really painful. So we worked on some ways to use mobile phones to have them basically pay their rent so that they could do their business, and then the City could get the money that they needed to be able to provide services, like toilets and

- sanitation for the people working in the markets.
- 2 \ Q. So in addition to the awards and the selection to the
- 3 | Service Corp., have you received any patents while you have
- 4 been at IBM?
- 5 A. I have received a number of patents.
- 6 Q. About how many?
- 7 A. About 65.
- 8 Q. Okay. Great. So let's turn to the patent that this
- g case is about. If you could take a look at Plaintiff's
- 10 Exhibit 4 in your binder. Let me know when you are there.
- 11 A. I am there. Thank you.
- 12 Q. What is that document?
- 13 | A. This is my '346 patent.
- 14 MS. STEMPLER: Your Honor, I offer Plaintiff's
- 15 **Exhibit 4.**
- MR. HADDEN: No objection.
- 17 THE COURT: It's admitted.
- 18 (PX-4 was admitted into evidence.)
- 19 BY MS. STEMPLER:
- 20 Q. Let's take a look at this document together,
- 21 Dr. Hinton.
- 22 What is the title of this document?
- 23 A. This document is titled: Method and System For a
- 24 Runtime User Account Creation Operation Within a
- 25 | Single-Sign-on Process in a Federated Computing Environment.

- Q. Okay. So we'll get to what that means in just a minute. Who are the inventors here?

 A. It's myself, Ivan Millman, Venkat Raghavan, and Shane
 - Q. And is this patent assigned to IBM?
- 6 A. It is.

Weeden.

- Q. At a high level, can you please describe your patent to the jury?
- A. Sure. One of the things that was known at the time, we were implementing what is called a federated single-sign-on protocol. And I think we will explain that.

One of the things that had to be in place, it's called a pre-rec, is that both parties in this relationship had to know who the user was. And if they didn't, it would fail. And so what we are talking about in this invention is how to allow the second party to call the service provider to create an account and know who a user is without actually having to involve the user in that process.

Q. Now, you said that your invention relates to single-sign-on. If we can go to the next slide.

Can you explain to us what a single-sign-on operation is?

A. Sure. So this is sign on. You would also know it as login or sign in. It's that process that you go to when you give your user name and your password to a website or an

application and they validate it.

So in this case we're talking about a user whose name is Patricia. And she is given, UP is her user name and password. She has given that to the application. The application has validated that and said, okay, I have actually checked this password. The password is valid. It belongs to Patricia. I know now this is Patricia.

And then what the application has done is it sent back a session cookie. And this session cookie says this is Patricia. And this is really important because if I didn't have that session cookie, every time Patricia goes to that application, she has to give her user name and password. It becomes unusable really quickly. The session cookie allows you to skip the user name and password with you login.

Q. Now, your patent is about single-sign-on. So if we can go to the next slide.

Can you explain to us the difference between sign on and single-sign-on?

A. Well, it turns on that pretty much every application that existed in the world at the time required this login process, this sign on process. And so it became really frustrating really quickly to give your user name and password to every application you had to log in into. So single-sign-on allowed that cookie and that assertion that

this is Patricia to be used by all of those other
applications instead of Patricia providing the user name and
password for every reapplication.

- Q. And what kind of single-sign-on is your patent about?
- A. So my patent works within the context of federated single-sign-on.

- Q. Okay. Before we get into detail about what federated single-sign-on is, can you tell us about the product you were working on at the time you came up with your idea for the '346 patent?
- A. Sure. I was what is called the chief architect, and we were building a product called Tivoli Federated Identity Manager.
- Q. What is Tivoli Federated Identity Manager?
 - A. It was a product, it was a sister product for something we called Tivoli Access Manager, and its role in life was to implement what are called federated single-sign-on protocols, so the stuff that would allow you to do this kind of single-sign-on in a federated environment.
 - Q. And were there any acronyms we can use to make it easier to refer the single-sign-on product here?
- A. So TFIM or FIM is the name of the product. You can just call it TFIM. And instead of saying federated single-sign-on, which is a mouthful, we would say FSSO.

Q. Thank you. So how did you get the idea for the '346 patent when you were working on TFIM?

A. Well, one of the things that we were introducing at the same time we were building this product was something called user interactive design or user centered design. So we spent a lot of time talking to clients. My marketing manager and I probably lived on airplanes and in hotels for a year and-a-half. We would talk to any client that would listen to us. We would try and understand what were the business problems they were trying to solve? What were they trying to do? So we could build a scenario.

So we would use these scenarios to understand how our products had to work in order to meet their business needs. And when you build a scenario, what happens really easily after that is you start building error cases. Right? I built the scenario, we put upon "what was the worst that could happen" hat. Right? Where was it going to break? It was when we were looking at where this is going to break, we realized we had a problem that we solved with the '346 patent.

- Q. Okay. So let's go into a little bit detail. Will you please turn to page 349 in your binder?
- A. Okay.

- Q. What that document?
- 25 A. This is called System Design Document Level Zero. So

1 acronym would be SDD0.

2 MS. STEMPLER: Your Honor, I offer Plaintiff's 39.

MR. HADDEN: No objection.

THE COURT: It's admitted.

(PX-39 was admitted into evidence.)

MS. STEMPLER: If we can just pull that up,

8 please, Mr. Kelly.

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BY MS. STEMPLER:

- Q. So Dr. Hinton, what is an SDD0?
- 11 A. It's a high level architecture and design document.
- 12 That basically it forms the contract with everybody involved
- in the development of a product on what it is going to look
- 14 | like and what it has to do.
- 15 Q. When you say "everybody," who would have been using
- 16 the system design document?
- A. Well, my market manager was using it to make sure
- 18 that what we were going to build was what he could sell. My
- developers used this to know what it was they had to build,
- 20 my test teams used these to understand what sort of test
- 21 cases that they would have to build.
- 22 We had a team of people called information
- 23 developers. They were the ones that would write the how to
- 24 games or TFIM for dummies. They would use this to know what
- 25 | it was they had to write to allow users to be able to use

- 1 this product.
- 2 Q. So did everybody working on the TFIM have to follow
- 3 the instruction on the STD0?
- 4 | A. Yes.
- 5 Q. If you take a look at the bottom left corner who
- 6 wrote that TP0?
- 7 A. I did.
- 8 Q. And when was it complete?
- 9 A. It was complete on the 15th of April 2004.
- 10 Q. When was it approved?
- 11 A. The 29th of April.
- 12 Q. Let's take a look at the page ending Bates number
- 13 | 940. Let me know when you're there.
- 14 A. Okay.
- 15 Q. Could you please read the first two sentences on that
- 16 page?
- 17 A. "In this scenario, a user, Patricia, has an online
- 18 account with Euro Express. A third-party (say the mobile
- 19 phone provider, Baxtel) has reached an agreement with Euro
- 20 | Express to allow Baxtel users to access their account
- 21 information through a single sign on relationship with Euro
- 22 Express."
- 23 Q. Did that describe a scenario that your invention was
- 24 designed to address?
- 25 A. **Yes**.

1 0. Let's flip back through the slides now. 2 look at slide five, what is this slide showing here? Well, so just for the sake of cutting out a pile of 3 steps, we skipped the authentication of Patricia, she's 4 5 already looking into Euro Express, she's got that cookie, that little blue thing down on the left. What Patricia is 6 7 going to do is use this sign on that she has with Euro Express to log in to Baxtel, but she does it without having 8 9 to give any information to Baxtel on her own. She goes to 10 Baxtel, Baxtel knows that it's a user from Euro Express, 11 they don't know that it's Patricia yet. Baxtel goes over to 12 Euro Express and says please tell me who this user is. She 13 is redirected, she's redirected over to Euro Express. 14 picks up that cookie along the way. Euro Express says I know who this is, I know it's Patricia. I'm going to build 15 16 this thing called a token and going to send it back to 17 Baxtel takes that token, looks at it, says got it, I know now that this is Patricia, I'm going to set up a 18 19 session with Patricia and Patricia is going to get a Baxtel 20 specific session.

- Q. Thinking about this scenario, Euro Express and Baxtel, are those two separate companies?
- A. Yes, they are.

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Q. What is the problem if we look at the next slide, what was the problem with the scenario?

A. The big problem was that both Baxtel and Euro Express had to know who Patricia was before they could do this single sign on. And if they didn't, then they couldn't figure out how to talk about her and if they couldn't figure out how to talk about her, then they couldn't do single sign on.

- Q. What does that mean for Patricia?
- A. It means for Patricia if Baxtel doesn't know who she is, she has to create an account at Baxtel, she has to teach Baxtel who she is.
 - Q. Let's take a look at the next slide. What would that involve?
 - A. So you have to select a user name and a password, but that's not enough because Baxtel doesn't know based on a user name, I could say I'm Patricia, and Baxtel wouldn't know the difference. So you have to go through a step that's called identity proven, that's a really important part. And typically you would prove who you are by giving your social security number or a credit card number, sometimes a driver's license, you give information that can be additional proof that you are who you claim to be.
 - Q. So before your invention, would Patricia have had to go through this for every company like Baxtel where she wanted to have an account?
 - A. Yes.

Q. And would Baxtel have to get this information from every user that it didn't have an account for?

- A. Baxtel would have to not only collect this information, but it would have to do whatever checks were necessary to make sure it was real information and that it referred to Patricia.
- Q. Let's take a look at the next slide. How did your invention solve the problem of users needing an account at companies like Baxtel?
- A. What we figured out was a way to allow Euro Express and Baxtel to talk to each other so that Baxtel could create that account for Patricia without having to do the identity proving steps. Because of the way it trusted Euro Express, when that token came across, I think we have got another animation. When that animation comes across, instead of Patricia getting an error condition, Baxtel is going to process that token and because it knows it's agreed with Euro Express that it can create this account for Patricia, it will create this account and now it goes and gives Patricia the cookie and she's signed on to Baxtel and she didn't have to do anything else to make that happen.
- Q. So where is that account created?
- A. At Baxtel.

Q. Does Patricia have to do anything here in this process?

- 1 A. No.
- 2 Q. Does Euro Express have to do anything other than
- providing a token to Baxtel?
- 4 A. No.
- 5 Q. Would Patricia be able to use her new account at
- 6 Baxtel in the future?
- 7 A. Yes.
- 8 | Q. With your invention, did Patricia ever use a user
- 9 name and password at Baxtel if she was using federated
- 10 single sign on?
- 11 A. No, she did not.
- 12 Q. Dr. Hinton, how did your invention benefit users like
- 13 | Patricia?
- 14 A. For people like Patricia, it meant that she could go
- 15 | to -- Baxtel is called a service provider. She could go to
- 16 any service provider that had an agreement with Euro
- 17 Express, and we call them an identity provider, she could go
- 18 to any service provider and as long as that service provider
- 19 had an agreement request, the identity provider, the service
- 20 provider could create an account for her and offer her
- 21 whatever services it was that they had to offer.
- 23 | they benefit from this?
- 24 A. Did they have to?
- 25 Q. Did they benefit from this?

A. Absolutely, right. For Baxtel, they didn't have to go through that process of proving who Patricia was which could be a time consuming step. And in some cases involved a lot of additional security steps if you were handling a credit card data, you have to do extra things from a security and compliance point of view to protect that, so it got Baxtel a lot of that sort of stuff, but it also meant Baxtel could basically offer services to any of Euro Express users and pretend that they were Baxtel users. Baxtel didn't have to do anything to go and get additional consumers, they could get them all through Euro Express.

- Q. As far as you know, had anybody else come up with a solution like yours?
- A. No.

- 2. So I would like to think about the timeline of the
 events surrounding the invention. Let's go to the next
 slide and take a look at the timeline together. When would
 you have had in your mind a complete idea of the '346
 invention?
 - A. The absolute latest would have been the 15th of April.
- 22 \ Q. Where are you getting that date from?
- 23 A. From the STD0.
- Q. Let's mark that on the timeline. And once your STDO was approved, what happened after that?

A. Well, my developers now start really working on actually writing the code to implement what we have described in this document.

- O. And what was the work that was involved in that?
- Well, a lot of work, a lot of caffeine. 5 commandeered an executive level office, which was really big 6 7 for my developers, and we covered one of the walls in whiteboards and every morning that I was in the office, I 8 9 would go in and we would fight over the whiteboard markers 10 and we would talk about what it was that they were building, 11 what was working, what wasn't working, what do we do, what 12 are the next steps, and we did that throughout the entire 13 development of the product.
- 14 0. That was in Austin?

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- 15 A. That was in Austin.
 - Q. Other than your Austin team, did you work with any other teams on the SDD0?
 - A. I have some developers and team members in Santa Cruz, California and then I had a couple on the Gold Coast in Australia.
 - $\ensuremath{\mathbb{Q}}$. How often did you meet with the folks who were off site?
 - A. We would email and instant message and telephone conference with them daily, but then they would come to us in Austin and the fellow in Australia, we actually brought

- Hinton direct him over and I believe it was twice, four to six weeks at a time, and he lived in Austin and then became one of my Austin developers when that happened. Who was that? 0. Α. That's Gavin Bray. In terms of the whiteboard meetings, how often were you having those in Austin? Every day that I was in the office. And my team had Α. them when I wasn't there, but I wasn't part of them. Were you testing your invention as well during this Q. time? Yes. Α. So let's mark on the timeline the work that you were Q. doing. If you could please turn to Plaintiff's Exhibit 774. Α. Okay. What is that document? This is the federated identity manager installation guide. MS. STEMPLER: Your Honor, I offer Plaintiff's Exhibit 774. MR. HADDEN: No objection. THE COURT: It's admitted. (Plaintiff's Exhibit 774 was admitted into
- 25 BY MS. STEMPLER:

evidence.)

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- Q. Let's go back to our projector here and take a look at this document together, Dr. Hinton. So federated identity manager, is that the same thing as TFIM?
 - A. Yes, it is.

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- Q. And it says installation guide. What was the purpose of an installation guide?
 - A. Well, this was back when software came on a CD and you had to plug it in and actually install it. So this was the detailed instructions, and there is a lot of them, on how to install software, where to put it and then how to configure it, how to make sure it was going to do what you wanted it to do.
- 13 0. What is the date on this document?
- 14 A. July 2004.
- 15 \ \Q. \ Now, it also says version 5.1 PRPQ. What is PRPQ?
- A. PRPQ is a special term that we have that designates this as a product that we are only going to sell to pre-approved customers.
- Q. Could you also please turn to Plaintiff's Exhibit 808 through 817 in your binder.
- 21 A. Okay.
- 22 Q. What are they?
- 23 A. These are pieces of code.
- MS. STEMPLER: Your Honor, I offer Plaintiff's Exhibit 808 through 817.

1 MR. HADDEN: No objection.

2 THE COURT: They're all admitted.

(Plaintiff's Exhibits 808 through 817 were

5 **BY MS. STEMPLER:**

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- Q. Dr. Hinton, is this the code for your invention?
- 7 A. Yes, it is.
- 8 Q. Was this code in the PRPQ?

admitted into evidence.)

- 9 **A.** Yes.
- 10 Q. To sum up, when did you know that you had built the invention of the '346 patent?
- 12 A. The absolute latest date was the July 2004 with this release.
 - Q. If we could go back to the slide, please. So we'll mark that on the timeline as well.
 - Dr. Hinton, what is the significance of your invention?
 - A. Well, like you were asking me about the benefits, what this meant was that we could make services available to users far more easily than they would have been able to get otherwise, and so it greatly expanded what was previously kind of a painful setup to go through and made it easy and simple to go through for people.
 - Q. Are you proud of your invention?
- 25 A. I am.

- 1 Q. There is another patent that I would like to talk to
- 2 you about today. If you turn to Plaintiff's Exhibit 2 in
- your binder, tell us what that is, please.
- 4 A. Okay.
- 5 Q. What is that document?
- 6 A. This is the '601 patent.
- 7 MS. STEMPLER: Your Honor, I offer Plaintiff's
- 8 Exhibit 2.
- 9 MR. HADDEN: No objection.
- 10 THE COURT: It's admitted.
- 11 (Plaintiff's Exhibit 2 was admitted into
- 12 evidence.)
- 13 BY MS. STEMPLER:
- Q. And Dr. Hinton, if you could just tell us what is the
- 15 | title of this patent?
- 16 A. The title of this patent is Preserving State
- 17 Information in a Continuing Conversation Between a Client
- 18 and Server Networked Via a Stateless Protocol.
- 19 Q. Who was the inventor?
- 20 A. This is Arun Iyengar.
- 21 Q. Do you know Dr. Iyengar?
- 22 A. He is a colleague at IBM.
- 23 Q. Who is this patent assigned to?
- 24 A. IBM.
- 25 Q. Is this patent another one of the patents in this

1	case'	

- 2 A. Yes, it is.
- Q. And will IBM's technical expert, Dr. Schmidt, explain
- 4 | this patent in more detail to the jury?
- 5 A. Yes, he will.
- 6 Q. Dr. Hinton, what gets you excited about your work at
- 7 | IBM these days?
- 8 A. I am in computer security, there is a lot of stuff to
- 9 do. I have a fantastic team of really smart people who love
- 10 coming into work, so it's really exciting and energizing to
- 11 be in that environment and doing things to, at the risk of
- 12 sounding kind of goose bumpy, make the world a better place.
- 13 Q. Having been at IBM for almost twenty years now, are
- 14 you proud to be a part of a company with so many
- 15 | innovations?
- 16 A. I'm still there.
- 17 MS. STEMPLER: Thank you.
- 18 THE COURT: Cross-examination.
- 19 MR. HADDEN: May I approach, Your Honor?
- 20 THE COURT: That's fine.

21 CROSS-EXAMINATION

- 22 BY MR. HADDEN:
- 23 Q. Dr. Hinton, you didn't invent single-sign-on, did
- 24 **you?**
- 25 A. I was there when we worked on building it. I was one

- 1 of the people who helped define it.
- Q. Single-sign-on was invented before IBM filed your
 3 '346 patent, wasn't it?
 - A. Yes.

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- Q. And at the time of your invention in the patent,
 there were single-sign-on systems in the world, or at least
 described in specifications like Liberty Alliance; right?
- 8 A. Correct.
- 9 Q. And Liberty Alliance was one of the standards for implementing single-sign-on systems at the time of your invention; correct?
- 12 A. There were two, SAML, Security Assertion Market
 13 Language was the predominant one, but then the Liberty
 14 Alliance ID-FF protocols were also out there.
 - Q. Just to be clear, Liberty Alliance was an existing industry specification for single-sign-on at the time of your invention; correct?
 - A. You know what, I have to check. I don't remember when they actually finalized. I know for sure it was in development. I don't remember when ID-FF.1 was actually finalized.
- Q. Could we see HH 55. You were deposed in this case, weren't you, Dr. Hinton?
- 24 A. Yes, I was.
- 25 Q. And I think your deposition should be in the binder I

- 1 | just gave you. Could we look at page 17, 9 through 13?
- 2 A. You got to give me more than that to go on.
- 3 Q. Page 17, lines 9 through 13.
- 4 A. Of which tab?
- Q. It's your deposition, it should be either the top or the bottom.
- 7 A. There is one that says 10/7/2016. There is one that 8 2/16/2017.
- 9 Q. It would be the 10/7 -- let me make sure I have it 10 right. It's the later one, 2/16/2017.
- 11 THE COURT: Page 17? Is that what you said?
- MR. HADDEN: Yes, Your Honor, page 17, lines 9
- 13 **through 13.**
- A. Starts with the first line saying developing the product; correct?
- 16 Q. Let me move on.
- Now, you and your colleagues at IBM actually relied on the Liberty Alliance standards when you built that TFIM product, didn't you?
- A. We implemented the ID-FF, a subset of the ID-FF protocol.
- 22 Q. And the customer that you were building the TFIM
 23 product for required that you implement the Liberty Alliance
 24 protocol; right?
- 25 A. Not really. We were building the TFIM product. We

- found a customer that explicitly wanted us -- we were
- 2 initially building TFIM with SAML, and then we found a
- 3 customer who wanted to pay us money to implement the ID-FF
- 4 protocol, we so added ID-FF to TFIM so we could sell it to
- 5 that customer.
- 6 Q. Let me ask you to look in your binder, Dr. Hinton,
- 7 to, it should be Defendant's Exhibit 45. It should be the
- 8 Liberty ID-FF --
- 9 A. 0645 or 45?
- 10 Q. **0645**.
- 11 A. And where do you want me to go in there?
- 12 Q. I like you just to look at the cover of the document
- 13 to start with.
- 14 A. Okay.
- 16 A. Yes, I do.
- MR. HADDEN: I would move Defendant's Exhibit
- 18 0645 into evidence, Your Honor.
- 19 THE COURT: Any objection?
- 20 MS. STEMPLER: No objection, Your Honor.
- 21 THE COURT: It's admitted.
- 22 | (Defendant's Exhibit No. 0645 was admitted into
- 23 evidence.)
- 24 BY MR. HADDEN:
- 25 Q. So is this one of the Liberty Alliance specifications

- 1 you used in developing the TFIM product?
- 2 A. This is actually the architecture overview. So it's
- 3 actually what is called a non-formative document. So this
- 4 doesn't actually -- this describes the protocol but it's not
- 5 | the protocol.
- 6 Q. Okay. Can we see HH57?
- This should be page 118, lines 7 through 9 of your deposition, Dr. Hinton.
- 9 A. I'm sorry. I'm not following where you want me to go.
- 11 Q. Sure. In the transcript of your deposition, the one
 12 on --
- 13 A. Back at 2/16/17.
- 14 \ Q. Yes. It should be page 118, lines 7 through 9.
- 15 A. Line 7. Is the last four words of the paragraph, a
- 16 couple of others?" I'm sorry. 118, line 7.
- 17 Q. I'm sorry. I've been sending you to the wrong deposition transcript.
- THE COURT: I think what has happened at least
 in mine is the tabs don't line up with the dates of the
 depositions.
- MR. HADDEN: Ah, I apologize. I will fix that at the lunch break.
- 24 BY MR. HADDEN:
- Q. So, I'm sorry, Dr. Hinton. Let's start over. It

Hinton - cross 1 should actually be the top deposition is dated September 2 1st, 2017. Do you see that? 3 Could you maybe -- am I allowed to ask you to put up there? Because I'm not following in here at all. 4 5 THE COURT: We will put it up there. didn't want the jury to see it until we get a chance to look 6 7 at it. 8 THE WITNESS: Can you show me? Because it's not 9 working. THE COURT: Yes, he can come do that. 10 BY MR. HADDEN: 11 12 Sorry, Dr. Hinton. Bad bindering on my part. Q. 13 You told me 118 but it didn't work out. Uh-uh. Α. 14 (Indicating.) Q. 15 Α. Okay. Thank you. 16 Q. You're welcome. 17 THE COURT: Again, for the record, September 1st, 2017? 18 19 MR. HADDEN: Yes, September 21, 2017; page 118, 20 lines 7 through 9. 21 THE COURT: Thank you. 22 MR. HADDEN: You're welcome, Your Honor. 23 THE COURT: Any objection to playing or sharing

MS. STEMPLER: None, Your Honor.

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that with the jury?

1 THE COURT: Okay.

2 "Question: Is this Liberty Alliance

3 specifications that you used in developing TFIM?

"Answer: Yes, it would have been.

5 BY MR. HADDEN:

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- Q. Liberty Alliance specifications described a single-sign-on system that can be implemented between different organizations; correct?
 - A. It defines federated single-sign-on between two independent entities, and it defines the protocols the way they talk to each other on how that would happen.
- 2. So the idea of federated single-sign-on was not something that was new when IBM filed the '346 patent; correct?
- 15 A. No.
- Q. And the Liberty Alliance specification that described federated single-sign-on included the concept of identity providers; right?
- 19 A. Yes.
- 20 Q. And they included the idea of service providers?
- 21 A. Yes.
- 22 Q. And they obviously included the idea of users of both service providers and identity providers; right?
- 24 A. Yes they did.
- 25 Q. And a user in the Liberty Alliance single-sign-on

federated scenario could choose an identity provider to use
in a single-sign-on process?

- A. If they had more than one identity provider, and then they went to a service provider who had a relationship with both of them, then, yes, they could choose.
- Q. Now, if we look at DX-645, the liberty ID-FF Architecture Overview.
- 8 A. Okay.

- 9 Q. If we look on page 6, Dr. Hinton, there is a heading 10 Federated Network Identity. Do you see that?
- 11 A. Yes, I do.
 - Q. And at the top of that page -- if we could blow it up, Brian -- it says: These capabilities can be achieved when, first, businesses affiliate together into circles of trust based on liberty enabled technology and on operational agreements that define trust relationships between the businesses and, second, users federate the otherwise isolated accounts they have with these businesses (known as their local identities).

That is generally describing this idea of a federated environment; right?

- A. Well, the federated environment is the first bit up to the customer relationship.
- Q. Can you look, Dr. Hinton, at that same document on page 23 is a heading, 4.4.1, Single-Sign-on and Identity

1 Federation. Do you see that?

A. Yes, I do.

here.

Q. Okay. It says here: The first time that users use an identity provider to log in to a service provider, they must be given the option of federating an existing local identity on the service provider with the identity provider login.

Do you see that?

- A. Yes, I do.
- Q. So a user with an account, an identity provider can federate that with their account at a service provider and thereafter they can single-sign-on the identity provider; right?
- A. Yes, the user has an account with the identity provider and the service provider, and they are federating, which is a fancy way of saying linking the two of them.
- Q. Right. So, for example, in this case, there is a discussion of signing on with Facebook. So if a user has an account at Facebook and they have an account at another website, they have basically federated with their Facebook account. Using Liberty Alliance, they could sign into that website using an identity provider like Facebook; right?

 A. Sorry. I'm not seeing any references to Facebook
- Q. I'm just using Facebook as an example of an identity

1 provider.

- A. Okay. So Facebook is an identity provider.
- 3 Q. Right. So if an user had an account with an identity
- 4 provider like Facebook, and an account that they had
- associated with the federated process, they can always then
- 6 sign on just using Facebook as their identity provider?
- 7 A. So, I think you skipped a couple of steps. But if I
- 8 | had an account at Facebook and then an account -- let's go
- 9 | back to Bastel because I had them in my slides. If I had an
- 10 account at Facebook and an account at BaStel, then
- 11 | federating those accounts or linking those accounts is the
- 12 process by which I teach the two of them to know how to talk
- 13 to one another.
- 14 \mathbb{Q} . And once the two of them know how to talk about you,
- 15 you can always single-sign-on with just the identify
- 16 provider?
- 17 A. I can then go to either the service provider or the
- 18 | identity provider. And I will, as far as I'm concerned, be
- 19 able to get access to all of those resources.
- 20 | Q. And your patent talks about Liberty Alliance, doesn't
- 21 | it?
- 22 A. I thinks it talks about both SAML and Liberty
- 23 | Alliance because those were the two standards out there.
- 24 Q. And having standards like Liberty Alliance and SAML
- 25 for a federated single-sign-on was important; right?

Because different entities need to know how to talk to each other to make this single-sign-on work; right?

- A. Right. So Liberty ID-FF ensured two parties that spoke ID-FF could speak to each other, and SAML ensured two parties that spoke SAML could speak to each other.
- Q. So if somebody was trying to build a single-sign-on system, federated single-sign-on system at the time of your patent, they would have known to look at industry standards like Liberty Alliance and SAML; right?
- A. They certainly would have been well advised to. I

 did in fact work on a couple of scenarios where we used an

 earlier predecessor we called cross domain single-sign-on to

 do federation, but it was within a very limited ecosystem.

 It wasn't broad the way we had with the standard like SAML

 or ID-FF.
 - Q. Let me ask you to turn in your binder, Dr. Hinton, to Defendant's Exhibit 646, which hopefully if I did it right is the Liberty IDFF Protocol and Schema specification.
- 19 A. **Um-hmm**.
- 20 Q. Do you see that?
- 21 A. Yes.

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- 23 A. Yes, I recognize this document.
- MR. HADDEN: I would move Defendant's 646 into evidence, Your Honor.

1 MS. STEMPLER: No objection, Your Honor. 2 THE COURT: It's admitted. 3 (DX-646 was admitted into evidence.) BY MR. HADDEN: 4 5 And this is another of the Liberty Alliance specifications that you and your colleagues at IBM referred 6 7 to when you were building that TFIM system, weren't you? 8 We referred to this when we were implementing the 9 IDFF protocol. 10 And the ID-FF protocol you were implementing was for Q. federated single-sign-on, right? 11 12 Right. You know, honestly I don't remember all the Α. 13 profiles we implemented, but we implemented a subset of 14 IDFF, Version 1.2. 15 So when you were building your software at IBM, you 16 performed federated single-sign-on, you referred to this 17 Liberty Alliance specification we have here, Defendants's 646? 18 19 I just, I want to be very clear. We had our 20 architecture. We had our design. What we were referring to 21 here was how to implement this protocol which was just a 22 piece of our product. 23 The next tab in your binder hopefully is Defendant's 647. It's Liberty Alliance IDFF Bindings and Profile 24 25 Specification. Do you see that, Dr. Hinton?

1 A. Yes, I do.

MR. HADDEN: I would move DX-647 into evidence,

3 Your Honor.

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MS. STEMPLER: No objection, Your Honor.

THE COURT: It's admitted.

(DX-647 was admitted into evidence.)

BY MR. HADDEN:

- Q. Now, this document, the bindings and profiles, that profiles kind of more detailed specifications about how the single-sign-on protocol is to be implemented if you are going to be Liberty Alliance compliant; is that right,
- 12 Dr. Hinton?
- 13 A. Yes, that is correct.
- Q. So this has very detailed XML, almost code level descriptions of the protocol; right?
 - A. The XML was, most of it is actually in the one that we just looked at or are in totally different documents, but this one sort of tells you how to move them together.
 - Q. And this exhibit, this Liberty Alliance IDFF bindings and profiles specification, is another one of the Liberty Alliance specifications that you and your colleagues used in implementing the Liberty Alliance single-sign-on protocol in the TFIM product?
 - A. Yes, we would have made sure that we were not breaking anything that was written in here as part of our

1 implementation.

- 2 Q. Now, you referred to Liberty Alliance in your patent,
- but IBM didn't provide any of these detailed specifications
- 4 to the Patent Office, did it?
- 5 A. Did we include these documents with our patent?
- Q. Did you provide these as prior art to the Patent
- 7 Office when you filed the '346 patent?
- A. You would have to ask the lawyers who submitted the
- 9 patent.
- 10 Q. Okay. Well, if we look on the face the patent, you
- see the '346 patent, there is a section that has the
- 12 references cited.
- 13 And if we can go over the whole section, Brian.
- 14 It doesn't list any Liberty Alliance
- 15 | specifications, does it?
- 16 A. I don't see any listed, no.
- Q. And you personally didn't provide these to the Patent
- 18 Office, did you?
- 19 A. No, this would have been our team who looks after
- 20 submitting our patent source.
- Q. Let me ask you to look at your patent itself, the
- 22 | '**346** patent.
- 23 | If we go to, let's take one of the figures, like
- 24 | Figure 11A. Do you see that, Brian?
- Now, 11A is not exactly a flowchart. It's a

chart that shows the back-and-forth communications between the different entities in a single-sign-on process; right?

A. Correct.

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- Q. All right. And it starts with: The user browses public resources at SP. Do you see that? 1102.
- A. Yes, I do.
- Q. So SP is service provider. An example would be like a website; right?
- 9 A. The service provider could be anything providing a service, but yes.
- 11 Q. But it can be a user browsing a public website at this point; right?
- 13 A. Sure.
- Q. And after that, we have: User requests protected resources for which SP requires session (authentication).
 - So that is where the user is asking for something where they would have to normally sign on or sign in at that website; right?
- 19 A. **Yes**.
- Q. Okay. So that could be, I don't know, me going to change my billing address on my Amazon account or something; right?
- A. I mean it could be anything that they have decided they need to know who you are.
- Q. And then after that, there is a whole bunch of

interactions between the service provider and the client and the identity provider that are sort of part of this single-sign-on back and forth; right?

A. Correct.

- Q. Okay. And everything that is shown in this diagram after we do the browse step down through step 1128, all of that is described in Liberty Alliance; right?
- A. Yes, it is described in Liberty Alliance. It is described in SAML. It is described in probably anything that is talking about cross domain or federated single-sign-on.
- Q. And the last part of this chart, 1132 and 1134, that's where sort of this service provider has been satisfied that this person is who they are and then 1134, providing the protected resource in a HTTP response, that's me gaining access to my Amazon account?
- A. 1132 and 1134 are the last two, are any provider, identity provider or service provider who has authenticated the user and determined that they get access to something so they process that access request and provide the access. It's shown here as the service provider, but it could be anybody, as long as you've authenticated the user, you can do 32 and 34.
- Q. And that was standard before your patent, right, once you're authenticated you get what you ask for?

- A. Assuming you pass whatever access control, do I have permission to act, to see what I have asked to see.
 - Q. Sure. And so if we look at 11A, the only step in here that was not sort of standard or known or part of Liberty Alliance is step 1130 where user is not federated to create new account using user with alias information provided by IDP; right?
 - A. Correct, that's not defined in the specs.

MR. HADDEN: Do you want to break for lunch, Your Honor?

THE COURT: I think it probably is a good time to break for lunch.

Ladies and gentlemen, I believe your lunch is here. We'll bring it to you in the jury room in a moment.

During the break don't talk about the case and we'll see you after lunch.

(Jury leaving the courtroom at 11:32 a.m.)

THE COURT: Dr. Hinton, you may step down. I'm going to talk with whoever wants to talk about the deposition objections that were filed yesterday. Everyone else is free to go. But if do you want to be heard on those before I make a ruling, since both sides have objected, I'll charge whoever is speaking at the time they're speaking and I'll split the time it takes me to tell you my rulings. So that if IBM wishes to say anything, come to the podium.

1 MS. SHAMILOV: Your Honor, can I grab a 2 colleague of mine? 3 THE COURT: Is she nearby? She should be nearby. 4 MS. SHAMILOV: 5 MR. HARRITS: Can I take that down now? THE COURT: Take that down and we'll wait a 6 7 moment. 8 MS. SHAMILOV: She is in our break room. Here 9 she is. 10 THE COURT: Do we have everyone we need? So we'll hear first from IBM, whatever you wanted 11 Welcome. 12 to say about the pending deposition objections. 13 MR. OUSSAYEF: Yes, Your Honor. Our primary 14 objection is as I mentioned this morning that after going 15 through the process of specifically identifying counters who 16 opening designations, now it appears that Groupon is simply 17 classifying any counters that were made in any opening designations or even designations that were made by IBM all 18 19 the way up on the transcript relating to other matters to 20 the parts that IBM wished to play. 21 And, you know, I think we selected parts of the 22 deposition transcripts to play based on understanding what 23 the counters would be, and ensuring that it would be a relatively narrow set that would be played to the jury as 24

opposed to a long list of counters. So that's our primary

objection there. And I would further say that the pretrial order does specifically say that you need to identify counters to opening designations. So that's the primary --

THE COURT: Doesn't it also say something to the effect, though, that you all could use other designated testimony that is testimony say that IBM designated might be available to Groupon to designate?

MR. OUSSAYEF: Yes. What that part is referring to in our understanding is the common sense principle that if IBM were to designate lines one through ten and then decided well, actually I'm only going to play lines one through five, then because Groupon couldn't identify part of what IBM already designated in the counter, that Groupon would have the opportunity to play that. That's not what's going on here. What's going on here is regardless of how much of that portion IBM is playing, and in fact, the vast majority of the time we're playing the entire part that we designated, Groupon is going to entirely different portions of the transcript outside of what we're playing.

THE COURT: Having reviewed it all, part of the problem is regardless of how it all happened, if we play just what IBM wants and not the Groupon part, I don't think we're really giving the context to the jury. Shouldn't I be concerned about that?

MR. OUSSAYEF: I think that if we look at what

IBM is playing, you know, there is portions above that we would have wanted to play, too, and there was portions that put that in context, but I think the portions we're playing are a fair representation of what happened, and I think the counters are things like, you know, an implication that maybe a legal counsel was involved which is in violation of a MIL, they're kind of opinions, like expert opinions about whether Groupon believes it infringes or not, and the key issue here is did Groupon take the notice of the patents seriously or did it just put up corporate representatives who in one case, the Schmitz deposition, that person was put up on if Groupon was aware of any of these patents and had not read the patents.

So those are entirely relevant and I'm not sure how the fact that someone might have an opinion about whether Groupon infringes or whether, you know, legal counsel has given them an invitation that there was some kind of an opinion that was not disclosed by counsel, why that's relevant.

THE COURT: That's just one example. I mean, large portions of this to my recollection are about, for instance, you know, user I.D. and cookies and whatnot, and if we just give the jury what you want and not the counter-designations, it seems like it's bordering on misleading.

MR. OUSSAYEF: Well, Your Honor, I think if we look at what is counter-designated, it's telling, because it ranges from page, you know, looking at the second page of this letter, looking in the middle paragraph, we have counter --

THE COURT: I'm sorry, I was referring initially to Groupon's counter-designations at the bottom of page one that relate to witness Sood, these are your objections to their counter-designations running from page 11 to page 120, a lot of which if I recall correctly had to do with how Groupon, you know, the software operates.

MR. OUSSAYEF: I think this goes back to the original point, this ranges from page 11 to 120. And it's all over the transcript, and I think it's more misleading if it's not actually closely tailored to the part of the transcript that we were playing. And it's also something that we couldn't have predicted. If they really thought that they needed context for something we designated, then they should have identified that, and then we would have had fair notice that we understand what they think needs to be put in context as opposed to we can play any part of the transcript that we think is helpful relating to the general subject matter even if it's not related to the line of questioning.

THE COURT: But the general subject matter how

did Groupon software work, you originally designated a lot more, I believe, right, than you ultimately want to play; is that correct?

MR. OUSSAYEF: Yes, that's correct, Your Honor.

THE COURT: They told you the full universe of what they were counter-designating and they have not gone beyond that universe; correct?

MR. OUSSAYEF: I believe there are a couple of instances where they went beyond anything that they counter at all.

THE COURT: We looked pretty close, you'll have to show us where they are, that's a minor point, there might be one or two here and there.

MR. OUSSAYEF: Fair enough.

THE COURT: But in general, they told you, yes, they specified this counter-designation A is for designation B, and then you dropped B, I understand that argument, but they're not proposing with maybe one or two minor exceptions to play something that they didn't tell you they wanted to play at the trial; correct?

MR. OUSSAYEF: Yes, that's correct, Your Honor.

I mean, I guess we would just say why can go through the process with identifying counters specific to opening, but your point is well taken, Your Honor. Now I kind of wished we just identified all parts of the transcript we would play

to my part.

THE COURT: If, in fact, I'm going to overrule this objection, do you want an opportunity to go back and reconsider some of what you had designated and then dropped and play that as well?

MR. OUSSAYEF: Yes, Your Honor, we would like that opportunity.

THE COURT: All right. Let me hear what Groupon has to say. Good afternoon.

MS. MEHTA: Good afternoon, Your Honor. Sapna Mehta on behalf of Groupon. I'll speak to IBM's objection first about our designations not being in the universe. We double checked and each of the counters that Groupon identified in this round were disclosed in the exhibit to the pretrial order that the parties submitted, either as an initial designation by IBM, which Groupon was entitled to use, if IBM dropped it or as a counter. And counsel suggested that the counters were on different pages and different ranges and unrelated to the text that they are now designated, but that's not true. And we found multiple instances in which the counters were designated to the initial designation that IBM --

THE COURT: It is correct, isn't it, that you specified counter-designations tied to their designations, they have now dropped some of those designations and you

still want to use those counters, correct.

MS. MEHTA: There are a few instances of that.

THE COURT: Why should I let you do that?

That's really what's at issue.

MS. MEHTA: In those instances, in a line of questioning, the initial question, for example, which IBM had initially designated, it is not seeking to introduce that testimony. Where we may have counters to that, they're now just starting at the next question in line, so under their proposal, we would lose our counter which is still in context and relevant to the discussion that the witness is talking about through that line of questioning. It's not as IBM has suggested page to page jumping topic to topic.

THE COURT: What was the point then of specifically counter designated with respect to particular designations.

MS. MEHTA: Well, I think as the pretrial order notes to give parties notice and to identified the full universe of designations that the parties were going to use. When we were counters the first time around we could only do so in the context of what we thought IBM would identify as all the testimony from that witness this that they want to play. That now looks very different when we look at a completely condensed and we think selectively pulled from what was initially designated, so we had to go back and see

what they cut from their original designations and what we countered to that.

THE COURT: And your representation is that
there are no instances where you have now counter-designated
something you want to play that wasn't listed as a
counter-designation in the original exhibit to the pretrial
order; is that right?

MS. MEHTA: I double checked all of the citations that counsel for IBM provided in terms of what they were objecting to and found all of those in the exhibits to the pretrial order.

THE COURT: Now, there are some specifics and we may hear more specifics from IBM when I return to them, but you're here now, so there were some references to whether legal opinions were obtained or whether that would be legal's problem as opposed to my problem, whoever the witness was. It's unclear to me if I overrule their objection, allow the counter-designations for so-called completeness, are you still also trying to get some things in about whether we talked to a lawyer or not? Because a lot of what you wanted to put in, it seemed to be contingent on if I didn't allow some other stuff in, so help me out with that.

MS. MEHTA: So sure, so that's in the Sood transcript at page 115. And Groupon has objected to this

entire line of questioning. And I'm sure we'll address that, but to answer Your Honor's question, IBM has only designated the portion, you know, they deem relevant asking the witness have you read the patents. But when the witness responds no and here is why, because another team at Groupon is responsible for doing that, they deem that irrelevant and exclude it. This has nothing to do with counsel about what defenses Groupon may have asserted in this case.

THE COURT: Just to be clear and you may not have been here this morning when I was saying this is a very complicated way of presenting these objections and we're going to help you to do it in a way that is easier for me to follow, but this issue we're now talking about, is the sum total of the argument on it at page two where I see 115, 8 to 11, and 116, 17 to 21, and there is two paragraphs there, or do I have to go somewhere else to understand this argument?

MS. MEHTA: No, that is correct.

THE COURT: That's it. So on that one if my understanding is -- if I don't allow IBM to play the parts about hey, did you read the patent, then you're not looking to have the witness say in essence, no, I didn't, because that's somebody else's responsibility; is that right?

MS. MEHTA: That is correct.

THE COURT: Anything else you want to touch on

while you're up here? I'll give you a chance to come back, but any of these others you want to be heard on?

MS. MEHTA: Not to IBM's objections unless Your Honor has specific questions.

THE COURT: No. But any of your objections, if you wish to argue them, you can.

MS. MEHTA: Sure. So ours are not by transcript but sort of group because they relate to each of the four transcripts, and there is a line of questioning at the end of each that we feel is irrelevant. It doesn't touch on any claim or defense in this case and it is highly prejudicial, because by asking these individuals at their depositions about whether they read the patents, implying that they avoided it, or what they feel about IBM as a company and its reputation, it's not relevant to any issue and we think that it's pretty clear from reading what was designated that it's meant to be argumentative and what the attorney is asking is really what's seeking to be introduced.

THE COURT: So it's unclear to me if some of these witnesses were designated as 30(b)(6) on these topics to give IBM testimony on behalf of Groupon. Is there an easy answer to that?

MS. MEHTA: Yes. So two of the witnesses were just 30(b)(1) witnesses. Two, Damien Schmitz and Jan Krems were the 30(b)(6) witnesses. Of those, only Damien Schmitz

was designated on topics related to Groupon's awareness.

But in looking at the specific testimony that IBM

designated, the questions have nothing to do with Groupon's

awareness of the patents. He was asked whether he

personally read the patents-in-suit and there is prior

testimony about how he is a finance guy and there is no

foundation in here that it was within his job responsibility

or he was the one responsible for reading the

patents-in-suit and understanding.

So in the questioning, the suggestion is as Groupon's corporate representative you opted not to read the patents-in-suit, so it was his job responsibility and within the scope of his job responsibility to do so.

THE COURT: Any others you want to touch on or is that it?

MS. MEHTA: I believe that's it.

THE COURT: Okay. We'll give you a chance to come back if you have anything to add.

Your response.

MR. OUSSAYEF: Your Honor, with regarding to the Schmitz deposition, it was Groupon's choice to designate him on awareness of the patents. It doesn't make sense to say well now that we've designated him on Groupon's knowledge of the patents and what they did, he's a finance guy so he can't talk about the patents. It definitely makes sense for

the jury to hear that the person who is testifying on behalf of Groupon to say what did he do when you knew about the patents, were you aware of the patents. To say I didn't even bother to read the patents.

THE COURT: But we all do, I'm not saying we do, but if we all know that Groupon's legal department analyzed these patents up and down and they got outside counsel and they had written opinions and all that, but that none of that is coming in, but when Groupon decided who to designate as a 30(b)(6) on its corporate awareness, that guy didn't read the patents, how is that even relevant?

MR. OUSSAYEF: What's at issue in this case is the long period of time where from 2011 until the time when suit was filed, there was no -- you know, there is nothing that happened according to, you know, even the interrogatory responses or anything, and you know, I think that that is highly relevant. There is a question of design arounds here. There was a question of whether they could do anything else other than the patent. So knowing whether they actually thought about doing a design around and knowing about those issues is very relevant here.

And I think if you can compare it to what just happened with Dr. Hinton on the stand, there is a question about did you know about the Liberty Alliance, you know, did you submit that to the patent office? It's a similar type

of question. Knowledge of a particular person on behalf of a company with what they knew is relevant to IBM's case.

THE COURT: That is where I'm just having trouble following the line of reasoning.

It's clearly relevant whether Groupon knew of the patents or not. But whether an individual that they put up as the 30(b)(6), whether he knew about them, when he knew about them or if he ever read them, that's where I'm just not seeing it. The company as a whole could have known about them even if he just learned about them the day before the deposition; right? You would agree with that?

MR. OUSSAYEF: Yes, that's true, Your Honor.

THE COURT: The company as a whole could have done a thorough legal analysis even if he said I didn't even know what a patent is. That is possible, right?

MR. OUSSAYEF: It's possible, Your Honor. But I still think it goes to, you know, if Groupon's response is we could have designed around this, then the fact that their witness doesn't have any testimony on potentially what they did as a result of awareness or what they allegedly did or what they could have done I think is relevant.

THE COURT: Is that different, though, than knowledge of the patents? Because you seem to have shifted to design-around.

MR. OUSSAYEF: I guess knowing about the patent

would be a prerequisite to design-around. Otherwise, it would be hard to figure out how to do what the patents are claiming.

THE COURT: Do you have any other evidence of their knowledge of the patents other than this Schmidt's 30(b)(6) excerpts that I have seen?

MR. OUSSAYEF: We do have other knowledge. More specifically, we have interrogatory responses and, you know, the pretrial order has certain statements of undisputed facts. We would say, though, that this would simply be a more important way of demonstrating lack of knowledge or lack of preparation, that kind of thing.

are trying to argue I think, and it does seem argumentative, as a company, they chose to put up as a 30(b)(6) on awareness of the patent an individual who himself didn't have the awareness, didn't have the expertise, and maybe didn't have the time or even cared to bother, but that is him. I'm just not sure what that has to do with whether Groupon as an entity had knowledge of the patent.

MR. OUSSAYEF: I mean I think the issue is if the company chooses someone to testify about awareness of the patents who isn't prepared, then that is an indication that is relevant to willfulness.

THE COURT: But if he truly wasn't prepared and

you didn't get testimony that you thought was appropriate from an adequately prepared witness, that would have been a discovery dispute. That is not an issue for the jury to decide.

MR. OUSSAYEF: I mean I suppose, Your Honor.

But another way to look at it would be that they're closed out from talking about these issues. I mean there is only a certain amount of things that we can -- if they say we don't have anything to say on this topic, there is only so much we can say to push to say are you sure they presented a defense to us to analyze more fully.

it is if you had come to me and said Schmidt I guess was not adequately prepared to testify about Groupon's awareness of the patents. And I said to you what is your evidence of that? And he said he is not a lawyer. He never read patents. He never heard the patents until yesterday, I would say that seems irrelevant to whether or not he is adequately prepared to testify about Groupon's awareness because if he also looked at the file that showed here is who within Groupon knew about it and here is all the work they did, then he would probably be adequately prepared.

There seems to be a disconnect there.

MR. OUSSAYEF: Okay.

THE COURT: But in any event --

MR. OUSSAYEF: I understand, Your Honor.

THE COURT: Any of these other issues you want to touch on?

MR. OUSSAYEF: Just on the fact that certainly IBM's reputation as an innovative company and the witness's understanding of that is clearly at issue. I mean opening statements were all about IBM is a good company, IBM is a bad company. And if a witness has a reputation, yes, I believe they're an innovative company, that seems very relevant in this case. And I think the representation maybe was or the argument was, well, it's argumentative. I mean it's, of course, it's something we want to use to prove our case but it doesn't make it prejudicial just because it's something that is relevant to the issues in the case.

Similarly, the witness's knowledge of or lack of knowledge of a prior art system would be relevant. These are people working in the space at Groupon, you know, doing their things with whatever technology they're using. And the fact that they don't know about anything prior is very relevant as people of skill in the art who are working in exactly the field accused of infringement.

THE COURT: Okay. Thank you.

MR. OUSSAYEF: Thank you, Your Honor.

THE COURT: Is there anything further, Ms.

Mehta?

MS. MEHTA: Thank you, Your Honor.

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On the awareness points, I would just note that it's not a disputed fact in this case. So there shouldn't be an issue for the testimony.

The second point is that is not the question asked. It was not Groupon's awareness of the patent. It was the individual testifying at what point and whether he had read the patent.

Counsel stated that it was relevant to design-arounds and avoiding infringement, but this witness was not designate on those topics and so that relevance argument doesn't hold true for these portions of the testimony.

THE COURT: So Groupon's awareness of the patents-in-suit and the date on which they became aware is not in dispute.

MS. MEHTA: Correct. And I would note on the point about testimony concerning IBM being an innovative company, both witnesses from which that testimony was designated were 30(b)(1) witnesses, and they are individual opinions about IBM or what it does is irrelevant to this case.

On the point about the one witness's knowledge of prior art, he was asked about systems, again, as in his individual capacity in the '80s, not establishing any

1 foundational testimony that he was even alive then or that 2 he had any basis to have personal knowledge of those facts. 3 THE COURT: Okay. MS. MEHTA: And I just wanted to address one 4 5 point. 6 I think earlier it was suggested that, you know, 7 maybe IBM be given the opportunity to identify new testimony in light of what Groupon has countered. I just wanted to 8 note for the Court that it did have an opportunity to 9 10 identify counter-counters and it did in some instances. 11 THE COURT: So do you object at this point if I 12 let them go back to the drawing boards and revisit not the 13 entirety of the depositions but the entirety of what they 14 had originally designated or counter or counter-counter designated it and tell you here is take 2 on what we now 15 16 want to play. 17 MS. MEHTA: We would because that was baked into 18 this process. 19 THE COURT: All right. 20 MS. MEHTA: Thank you. 21 THE COURT: Is there any chance we're still 22 getting to these depositions today in light of the fact 23 we're going to take at least on the 10 minutes or so on this lunch break? 24

MR. OUSSAYEF: No, Your Honor. I don't think

1 we'll play them today. 2 THE COURT: All right. Well, I will get you a 3 decision on these depositions by the end of today so you will be prepared for tomorrow. And we'll give you of an 4 5 example of how we want you to do them in the future. 6 Do you anticipate more objections for as early 7 as tomorrow, additional depositions? 8 MR. OUSSAYEF: We can. We will file something 9 tonight, Your Honor, that will identify the full universe. 10 We can meet and confer with Groupon. There may still be more witnesses 11 THE COURT: 12 tomorrow for depositions? 13 MR. OUSSAYEF: I believe we designated the full 14 scope of the depositions we intend to designate at all in 15 this case with the understanding that Mr. Breen is still a 16 "will call" for Groupon. 17 MS. SHAMILOV: That's correct. 18 MR. OUSSAYEF: Okay. 19 MS. SHAMILOV: So I believe we might have to 20 play our transcripts, but I don't think tomorrow or even 21 Thursday or Friday of this week. But we may have to deal with this issue at some point. 22 23 THE COURT: Again, during the trial, but not in

the next day or two it sounds like.

MS. SHAMILOV: Agreed.

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1	THE COURT: Wonderful. Well, we will check with
2	you and the jury in 10 or 15 minutes.
3	MS. SHAMILOV: Your Honor, one very quick
4	housekeeping.
5	THE COURT: Sure.
6	MS. SHAMILOV: I believe during the cross one of
7	the exhibits was not admitted and it was published without
8	it being admitted. How do you want to deal with that?
9	THE COURT: Maybe find time after this witness
10	to put that on the record, and we'll let it in. I'm sure it
11	won't be objected to.
12	MS. SHAMILOV: Okay.
13	MR. OUSSAYEF: Yes, sir.
14	(Lunch recess taken.)
15	* * *
16	1:15 p.m Afternoon Session
17	THE COURT: You can bring the jury back in.
18	(Jury returned.)
19	THE COURT: Welcome back. I hope everyone
20	enjoyed your lunch. We're ready to resume.
21	And, Mr. Hadden, welcome back.
22	MR. HADDEN: Thank you, Your Honor.
23	BY MR. HADDEN:
24	Q. Good afternoon, Dr. Hinton.
25	A. Good afternoon.

MR. HADDEN: Can we see Plaintiff's Exhibit 774, please, Brian.

BY MR. HADDEN:

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- Q. Dr. Hinton, I put up on the screen one of the documents that you talked about with IBM's counsel. Do you remember this document?
 - A. Yes, I do.
- Q. And this is the installation guide for a version of your TFIM product; is that right?
- 10 A. Yes, it is.
 - Q. Okay. An installation guide is something you would provide to customers I assume to show them how to install the software?
 - A. Yes. So it would go to customers, it would go to our sales engineers, anybody. It would actually go to our test team. Anybody that needed to install and configure the TFIM product.
 - Q. And you relied on this document that your IBM's counsel showed you for your July 2004 date when you said that showed that the system was built by July 2004; right?
- 21 A. Yes, TFIM. We showed TFIM in July 2004, correct.
 - Q. And the PRPQ version of the product, TFIM product that you shipped in July of 2004, in that product, the runtime account creation that is your invention was not enabled in that product, was it?

- 1 A. It was not exposed to our customers.
- Q. Right. So customers who bought this product in July
- 3 2004 could not use it to perform your meta; correct?
- 4 A. We didn't give them instructions on how to use it. I
- 5 can't say they couldn't fit on their own. We didn't tell
- 6 them how to do it.
- 7 Q. You don't have any evidence that any customer that
- 8 purchased this PRPQ version of this product ever used it to
- 9 perform runtime account creation, do you?
- 10 A. I don't have any personal knowledge of that, no.
- 11 Q. And you don't have any documentation that would show
- 12 | that IBM actually tested the runtime account creation before
- 13 October of 2004, do you, Dr. Hinton?
- 14 A. Again, I don't have any, no.
- 15 \ \Q. You didn't provide any documentation to the jury that
- 16 would show that IBM tested runtime account creation before
- 17 October of 2004, did you?
- 18 A. I did not provide any documentation to this, no.
- 19 Q. And you talked about some source code with your
- 20 counsel. I think they were Plaintiff's Exhibits starting at
- 21 808. Do you recall that?
- 22 A. Yes.
- 23 Q. Okay. And that source code was written by Gavin
- 24 Bray, correct?
- 25 A. **Yes**.

- 1 Q. You didn't write that source code?
- 2 A. No, I did not.
- Q. And you didn't instruct Gavin Bray personally how to
- write that source code before he wrote it, did you?
- A. I didn't tell him, you know, set up a file called connectors and set up a connect name called "add user to L dot." But I told him right through the SDDO meetings, I
- 8 told him this is what the code has to do.
- 9 Q. Well, before Gavin Bray wrote this source code that
 10 is Plaintiff's Exhibit 808, you didn't personally give him a
 11 copy of that SDDO document, did you?
- 12 A. I wouldn't have personally landed him one.
- 13 Q. Okay. So you do not?
- 14 A. I did not give it to everybody on the team, though.
- 15 | I mean it would have been given to everybody on the team.
- 16 Q. You have no evidence that Gavin Bray was given a copy
 17 of that SDDO document or any other document you created that
- describes your invention before he wrote this code, do you,
- 19 Dr. Hinton?
- A. Not in one that has been provided in this binder here, no.
- 23 A. I have nothing in these binders that says that.
- Q. Well, have you provided anything to the jury that would give them evidence that you provided those

- 1 | instructions to Mr. Bray before he wrote the code?
- 2 A. We have not provided anything in these binders.
 - Q. Okay. And let's look at your patent again. And let's look at claim 1, if we could.
- 5 MR. HADDEN: Can we get that up? If we could just blow it up.
- 7 BY MR. HADDEN:
- 8 \ Q. Now, claim 1 is a method claim. You see that,
- 9 Dr. Hinton?

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- 10 A. Yes, I do.
- 11 Q. A method claim has steps that have to be performed;
- 12 | right, Dr. Hinton?
- 13 A. I'm not going to speak as a patent lawyer, but I'm
- 14 going to tell you that what we claim here is a set of steps
- 15 | that have to be performed.
- 16 Q. Right. And those steps are in the context of a
- 17 | federated computing environment; right? That is in the
- 18 beginning of the claim there; right? Do you see that?
- 19 A. Within a federated computing environment, correct.
- 20 Q. Right. And it involves a first system and a second
- 21 system, right?
- 22 A. Yes.
- 23 \ Q. And those two systems have to communicate in this
- 24 | federated computing environment in order to perform the
- 25 steps of this claim, right?

1 A. So the first system interacts with the second system.

Q. Right. And you have provided no evidence to this

4 federated computing environment before October 2004, have

jury that those steps have ever been performed in a

5 you, Dr. Hinton?

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- A. I'm sorry?
- 7 Q. You have provided this jury no evidence that the
 8 steps of claim 1, which have to be performed between a first
 9 system and a second system and a federated computing
 10 environment, ever occurred before October 2004, have you,
 11 Dr. Hinton?
 - A. Well, to be precise, yes, we have demonstrated through the FDDO and through the PRPQ that the first system and the second system are talking to each other in the context of federated single-sign-on, so they are interacting.
 - Q. That wasn't my question. Please listen to the question. These steps are performed by computers, one is in a first system and one is at a second system; correct?
 - A. But all you are saying --
- 21 \ Q. That's a yes-or-no question.
- 22 A. Okay.
- 23 Q. Is it performed by --
- THE COURT REPORTER: One person at a time,
 please.

1 THE COURT: Let's re-ask the question. 2 MR. HADDEN: Sure. 3 BY MR. HADDEN: Now, this claim, claim 1 requires steps that are 4 0. 5 performed at a first system and at a second system in a federated computing environment. Isn't that true, Dr. 6 7 Hinton? 8 Α. Yes. 9 And you have no evidence that any first system 10 interacted with a second system in a federated computer computing environment to perform the steps of this claim 11 12 before October 2004, do you, Dr. Hinton? 13 Absolutely. I have the PRPQ saying that the first 14 system and the second system interact as part of my PRPQ. 15 Your PRPQ is not two computers interacting with each 0. other to actually perform these steps, is it, Dr. Hinton? 16 17 My PRPQ is software that can implement either side or both sides of those two computers talking to each other. 18 19 Correct. And that was not enabled in July 2004. So 0. 20 my question is -- please let me ask my question? 21 MR. DESMARAIS: Objection, Your Honor. 22 In the world where we have two computers that have to 23 talk to each other to perform these steps in a federated 24 environment, you have no evidence that that actually 25 occurred before October 2004, do you?

Hinton - cross 1 Α. I do. I have the PRPQ release which has software 2 that allows the first system and the second system to interact with each other. 3 But you have no evidence that that software was ever 4 0. 5 executed between two systems to actually interact and perform the steps of claim 1 before October 2004, did you? 6 7 Α. I guess I don't understand what you mean by evidence. I had a product, we made a product available to a client, 8 9 the client installed it, we tested it, they tested it, it 10 was used. 11 You have no evidence that the system was actually 12 used by anybody in the real world between two systems in a 13 federated environment in the real world to perform this step 14 before October 2004? 15 MR. DESMARAIS: Asked and answered several times, Your Honor. 16 17 THE COURT: You can keep asking if he wants. I'm going to say yes I do because I have an 18 Α. 19 installation guide and we could not have developed that 20 installation guide if we had not tested and demonstrated 21 that the two systems could talk to each other. 22 So your only evidence is the document 774, the 23 installation guide for the version of the product in which

this feature was not enabled, that's what you're telling the

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jury?

A. I think it feels like you're overloading, right, so
you're talking about first of all two systems talking to
each other in categorically in the installation guide we
demonstrate and we had to have tested in order to develop
that installation guide that we had the two systems talking
to each other. So you're still at the two systems talking
to each other.

- Q. Well, can you point me to any two entities in a federated computing environment in which this claim 1 was performed in the real world before October 2004?
- 11 A. It's 2018, no.

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- MR. HADDEN: No further questions.
- 13 THE COURT: Redirect.

REDIRECT EXAMINATION

- 15 **BY MS. STEMPLER:**
 - Q. Dr. Hinton, counsel was asking you about whether the patent office knew about the Liberty Alliance. Do you remember that?
- 19 A. Yes.
- Q. Okay. So let's take a look at Plaintiff's Exhibit 4.

 Let me know when you have that.
- 22 A. Yep.
- 23 Q. If you can turn to column two, it's Bates ending 669
 24 and it's a section called Background of the Invention. Do
 25 you see that?

A. Yes, I do.

- 2 Q. Okay. So taking a look at column two, just zoom in a
- 3 | little bit, and Dr. Hinton, this is your patent, Plaintiff's
- 4 Exhibit 4; correct?
- 5 A. Yes, it is.
- 6 Q. So in this background section on your patent, going
- 7 | to column two, if you look at line 25, the lines aren't
- 8 | exactly lined up. It says, "various prior art
- 9 | single-sign-on solution, e.g., such as those described in
- 10 | the Liberty Alliance ID-FF specification, require that a
- 11 user have an authenticate account both an identity provider
- 12 and a service provider as a prerequisite to a federated
- 13 single-sign-on operation. Do you see that?
- 14 A. Yes.
- 15 \ Q. In your background you told the patent office about
- 16 | Liberty Alliance; right?
- 17 A. Yes, we did.
- 18 Q. If we look a little bit further down, one of the
- 19 things that it's describing it says in line 36, "Although
- 20 some federated solutions provide a robust set of federated
- 21 user life cycle management operations such as user account
- 22 creation, user account management and user attribute
- 23 management, account suspension and account deletion, these
- 24 | federated management systems do not provide a lightweight
- 25 solution that is suitable for certain federation partners or

1 for certain federated purposes."

Do you see that?

- A. Yes, I do.
- 4 Q. Here you're describing a problem with the prior art;
- 5 | right?

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- 6 A. Yes.
- 7 | Q. Finally, you say, therefore it would be advantageous
- 8 to have methods and systems in which enterprises can provide
- 9 comprehensive single-sign-on experiences to users in a
- 10 | federated computing environment in a lightweight manner that
- does not require an extensive amount of a priori processing,
- 12 do you see that?
- 13 | A. Yes I do.
- MR. HADDEN: Objection. Leading.
- 15 THE COURT: Let's avoid the leading.
- 16 MS. STEMPLER: Thank you, Your Honor.
- 17 Q. Is that the solution?
- 18 A. It's defining what we were going to be doing,
- 19 | implementing a lightweight solution that doesn't require an
- 20 extensive amount of priori processing.
- 21 \ Q. Is that what your invention did?
- 22 A. Yes.
- 23 Q. So the patent office knew about the Liberty Alliance
- 24 in your patent; right?
- 25 A. One would assume so.

- 1 Q. Okay. Earlier we were -- counsel was asking you
- about the code that Mr. Bray had written for your invention.
- 3 Do you remember that?
- 4 A. Yes.
- 5 Q. Was Mr. Bray a part of your team?
- 6 A. Yes, he was.
- 7 Q. And was he following the STD0?
- 8 A. Yes, he was.
- 9 MR. HADDEN: Objection. No foundation.
- 10 | THE COURT: Sorry?
- MR. HADDEN: She has no knowledge, no
- 12 foundation.
- 13 THE COURT: Overruled. She answered the
- 14 question. Go ahead.
- 15 **BY MS. STEMPLER:**
- 16 \ \Q. \ Was the STDO the blueprint for your team?
- 17 A. Yes.
- 18 Q. Did the members of your team have to follow the
- 19 instructions in the STD0?
- 20 A. Yes, they did.
- 21 Q. Now, counsel was also asking you about the PRPQ. Do
- 22 you remember that?
- 23 A. Yes.
- 24 \ Q. When the PRPQ by the time it was released in July of
- 25 | 2004, the PRPQ, did it have the code for your invention?

Hinton - redirect

- 1 A. Yes, it did.
- 2 \ Q. Had it been tested at that point?
- 3 A. Yes, it had.
- 4 | Q. Finally, let's take a look at figure 11A going back
- 5 to Plaintiff's Exhibit 4. This is your patent again; right?
- 6 A. Yes.
- 7 \ Q. This is Bates ending page 666. Do you see that?
- 8 A. **Yes**.
- 9 \mathbb{Q} . Okay. So you were asked about a series of steps. If
- 10 you take a look at step number 1130, Dr. Hinton, what does
- 11 | that say there?
- 12 A. The user is not federated, so create new account for
- user with alias information that is provided by IDP.
- 14 \ Q. Was part of your invention implementing this step in
- 15 the other steps that we see here?
- 16 A. Yes.
- 17 Q. Is that a difficult thing to do?
- 18 A. It took us a while to figure out how to do it.
- 19 Q. And what was the significance once you finally
- 20 | figured out how to do it?
- 21 A. What we did was we were able to define and implement
- 22 | a lightweight means of doing this account creation so that
- 23 | if we could go back to the very beginning slide, Patricia
- 24 could go and access all of those resources at Baxtel and
- 25 everybody else based on her relationship with Euro Express

1 and Baxtel could use that relationship to provide her 2 services. 3 MS. STEMPLER: Thank you. THE COURT: All done? 4 5 MS. STEMPLER: Yes, Your Honor. 6 THE COURT: Thank you. Dr. Hinton, you may step 7 down. 8 Call your next witness. 9 MR. DESMARAIS: Thank you, Your Honor. Our next 10 witness will be Dr. Schmidt who is our technical expert who 11 will discuss the issues of patent infringement. And it will 12 be a long examination, so it will probably take us to at 13 least the end of the day. And he's going to talk about 14 bedrock number two. And my colleague, Mr. Oussayef will do the examination. 15 ... DR. DOUGLAS CRAIG SCHMIDT, having been first 16 17 sworn on oath, was examined and testified as follows... 18 THE COURT: Welcome, Dr. Schmidt. We'll clean 19 that up as soon as you get your own binders up there. 20 MR. OUSSAYEF: Karim Oussayef for IBM. May I 21 proceed, Your Honor? 22 THE COURT: You may. 23 DIRECT EXAMINATION 24 BY MR. OUSSAYEF: 25 Good afternoon, Dr. Schmidt.

1 A. Good afternoon.

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- 2 Q. Could you tell us what you do for a living?
- 3 A. I'm a computer science professor at Vanderbilt
- 4 University in Nashville, Tennessee.
- Q. Can you tell us what your job responsibilities entail at a high level?
- A. I conduct research on various topics related to

 computer networking and distributed systems and software

 engineering, and I also teach a variety a courses on many of
- 11 Q. Where do you live, Dr. Schmidt?

the same topics that I do research on.

- 12 A. I lived in Franklin, Tennessee which is about a half
 13 an hour south of Nashville.
- 15 A. I do. I have a wife and an eleven-year-old son.
- 16 \ Q. I would like to hand you a binder right now.
- MR. OUSSAYEF: Your Honor, may I approach?
- 18 THE COURT: You may approach. And if you would
 19 clean up the Dr. Hinton's binders while you are up there.
- 20 MR. OUSSAYEF: Yes, Your Honor.
- 21 THE COURT: Dr. Schmidt, as you may have heard
 22 me say, you may use this left counter.
- 23 THE WITNESS: Thank you.
- 24 BY MR. OUSSAYEF:
- Q. Dr. Schmidt, I have handed you a binder. Would those

demonstratives aid in your presentation today?

- A. Yes, they would.
- Q. Let's start with slide two here. I would like to
 talk a little bit about your background. Could you give us
 a little bit of information about your educational
- 6 background, please?

- A. So I received my Ph.D. in computer science from the University of California Irvine and I also have a masters degree from the University of California Irvine as well.

 And as part of my research I did a lot of work on computer networking software, distributed systems, software engineering and so on.
- Q. Could you give us a little bit of an overview about your academic career, please?
 - A. I have been a professor at three different places. I was a professor at Washington University in St. Louis. I was a professor at U.S. Irvine where I got my degrees. And for the past fifteen years or so or I have been a professor at Vanderbilt University where I'm a director of the data science institute.
 - Q. Dr. Schmidt, have you won any awards at Vanderbilt University?
 - A. Yes. In 2015 I received the School of Engineering

 Award For Excellence in Teaching for my teaching on topics

 like global cloud computing, service oriented architecture.

Schmidt - direct

Q. Let's move on to your experience. Could you tell us, do you have any relevant experience in the United States armed forces?

- A. Yes. I was a program manager and a deputy office director at the Defense Advanced Research Project Agency.

 You heard of ARPA before, they helped create the internet years back. And I worked there for a number of years as a program manager leading the United States' effort for software and network distributed systems.
- Q. I see below that you are a member of the United
 States Air Force Scientific Advisory Board. What is that?
- A. The Scientific Advisory Board is a board of scientists and researchers who help the United States Air Force be more speculative in carrying out the missions they're responsible for in cyber security, air defense and also space. And as part of that activity I helped to do two things. As you're probably aware, many of the airplanes that the Air Force flies have been around for a long time and will continue for a long time. In fact, people sometimes say there are pilots for the B-52 who have not yet been born because they expect to be flying until 2050. So I worked on various ways to help make sure the software for those systems can live for a very long time. I also worked on cyber security issues that we will talk about.
- Q. Can you tell us your relevant industry experience?

Schmidt - direct

A. I have also been the deputy director and chief technology officer for the Software Engineering Institute which is a federally funded research development agency or center that is at Carnegie Mellon University in Pittsburgh. And there I was responsible for strategy for our research in software engineering and cyber security that affects almost all government agencies as well as many defense agencies as well.

- Q. Do you have any other relevant industry experience, Dr. Schmidt?
- A. I have also been the chief technology officer for a couple of startup companies where we took the research I was doing as a professor and helped transition it to be more effective at computer networking and distributed systems.
- Q. Let's move on to slide 4 here. Here on slide 4 I see you have an image of a cruiser here. Could you tell is what this is showing us?
- A. Sure. This is an example of the kinds of applications that some of my software research has been applied to. This is something called a distributed realtime embedded system which is also known as a system where the right answer delivered too late becomes the wrong answer.

So for those of you who ever driven around Morristown in New Jersey there is a cruiser in the cornfield. It's an AEGIS cruiser superstructure and

Schmidt - direct

essentially what those ships do is they go out and sense the environment looking for incoming airplanes and incoming missiles. They have to be able to tell very quickly, is it a friend, is it a foe, is it a commercial airliner. And if they make that determination too late, if they make the right answer but it comes in too late, the ships mission will be critically compromised and it could be destroyed. So I build software that helps those systems work together more effectively.

- Q. So now let's look at the next slide. I see here you have various green computers and maps of the United States. What are showing on slide five?
- A. I was part of the cyber security board for the United States Air Force. As we're all unfortunately aware, the U.S. and citizens are under constant cyber attack, people trying to steal your identity, trying to steal our credit history, trying to steal our credit card numbers and so on, and not surprising the United States Air Force and its facilities are also under continuous attack by many bad actors around the world, so I worked on a study where we went around to all the Air Force bases and figured out better ways to defend by detecting these attacks and finding ways to work with them before they become a problem.

MR. OUSSAYEF: Your Honor, IBM offers

Dr. Schmidt as a technical expert witness with expertise in

the field of computer hardware, software and internet communications.

MR. HADDEN: No objection.

THE COURT: He's so recognized.

BY MR. OUSSAYEF:

- Q. I would like to go to the terms you considered in rendering your opinions in this case. Let's start off with the patents in the file histories. Can you tell us what materials you considered there?
- A. So as is shown here in exhibit PX 03, or 01, 02, and 04, for over the past two years I have been analyzing the patents, reading the specifications, looking at the claims that are defined in the patent, looking at the Court's construction of these claims.
- Q. And moving on to slide 8, did you review anything else in rendering your opinions here?
- A. Yes. For the past fourteen months since the spring or April of 2017, I have been recording and analyzing videos and images of Groupon's website and mobile apps as well as also recording and analyzing the communications that flow between the users on their mobile apps or their mobile websites, web browsers and Groupon servers.
- Q. Let's start with the videos. Could you tell us a little bit about how you captured the videos for Groupon's website and mobile applications?

1	A. So the website I used a tool called Quicktime. If
2	you ever used a Mac, you're probably familiar with
3	Quicktime, you can use it to play videos, you can use it to
4	record videos. So for the website, the desktop and laptop
5	environment I used Quicktime. Also for the iPhone. And
6	then for the Android phone I used a screen capture
7	technique, a video capture technique that's part of Android
8	ADB, their bucking mechanism.
9	Q. And those created Exhibits PX 964, 967, 969, 971,
10	973, 976, 978, 980, 986, 988, and 990?
11	A. That's correct.
12	MR. OUSSAYEF: Your Honor, IBM offers those
13	exhibits.
14	MR. HADDEN: No objection, though I thought he
15	had to show them to him.
16	THE COURT: Well, I think you're going to be
17	showing them at some point; correct?
18	MR. OUSSAYEF: Yes.
19	(The above exhibits were admitted.)
20	BY MR. OUSSAYEF:
21	Q. And Dr. Schmidt, while we go through this
22	presentation, will we see images from the videos, the images
23	that you captured and the HTTP archives referenced here on
24	slide 8?
25	A. Yes, absolutely.

1 THE COURT: Subject to that they are admitted. 2 BY MR. OUSSAYEF: 3 Next can you tell us how you captured the images here 4 on slide 8? 5 In addition to capturing the videos, I also wanted to capture screen shots of the various Groupon websites and 6 7 mobile apps in use, so I took screen shots of the different 8 applications we're talking about different ways of logging in, so in that case I used screen technologies, like print 9 10 screen, you probably all used that before to capture the 11 images on the website version, the browser version or the 12 mobile applications version. 13 And those are exhibits PX 526, 963, 966, 972, 975, 14 982, and 984; is that correct? 15 Α. That is correct. MR. OUSSAYEF: Your Honor, IBM offers those 16 17 exhibits. 18 MR. HADDEN: No objection. 19 They're admitted. THE COURT: 20 (The above exhibits were admitted.) 21 BY MR. OUSSAYEF: 22 And finally I would like to discuss the last thing on 23 the lower right here, the HTTP archives. Can you tell us a little bit about that? 24

Sure. Videos and images are ways of recording things

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Schmidt - direct

that we would see as end users. It's also useful to be able to record the communications that go back and forth between a client of a web browser or a mobile device and a server. To kind of be able to peek under the covers, look under the hood of what's actually going on, I used some technology that's available in modern web development environment such as the Chrome browser if you ever used a Chrome browser this a tablet that you can select called Dev Tools. It's a tool that let's you do things like look at the HTML code and the various Java codes and the various web forms or other types of style information that is actually being used to display what you see on the screen, so it was capturing that information.

Then I was also able to use the Dev Tool to be able to record every request from a client to a server and every response from the server back to the client, so it would indicate what information was sent across, what came back, what HTML, what Java script code, images and so forth, that go back and forth between the client and the server. And the Dev Tools environment in Chrome will actually let you record these things and these are called HTTP archives, basically a time stamped record of communication between the client, the sender and the receiver and I want the results that come back, that is what I did for the browser version on the desktop and on the laptop for the mobile device.

- Q. Dr. Schmidt, what did you do for the mobile devices?
- A. So for the mobile devices, I didn't have -- they

 don't run in a browser so they run in what are called native

applications. They're the things you download to your phone

5 from the app store or what not.

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And in that case, I use something called the Charles proxy, which is essentially a piece of software that intercepts the communication from the mobile device before it gets sent out to the network, keeps track of what happened, then lets the request go on.

Then when the response comes back, it actually comes back to the proxy where we can examine it and record it much in the same way that the div tools work, and then sends a reply back to the mobile app. So this Charles proxy allowed me to get this very detailed flow of communications from client, which in this case was the mobile app to server and then back again.

- Q. Thank you, Dr. Schmidt. So in those created exhibits PX-525, 965, 968, 970, 974, 977, 979, 981, 983, 985, 987, 989 and 991; is that right?
- A. That's correct.
- MR. OUSSAYEF: Your Honor, IBM offers those exhibits.
- MR. HADDEN: No objection.
- 25 THE COURT: Those are all admitted.

1 (Above-referenced exhibits admitted into evidence.) 2 BY MR. OUSSAYEF: 3 Next, I'd like to talk about Groupon's computer code. Ο. Did you review any computer code to reach your opinions in 4 5 this case? 6 Yes, I did. I had access to all the computer code 7 for Groupon's website and mobile apps, which we will talk about in more detail, and I analyzed the computer code that 8 9 was relevant to the patented inventions. 10 And did the source code you reviewed include PX-1112, Q. PX-1186, 1188, 1192, 1194, 1202, 1203, 1211, 1224, 1229, 11 12 1341, 1344, 1367, 1371, 1380, 1388, 1393, 1399, 1405, 1406, 1411, 1412, 1413, 1433, 1458, 1460, 1462, 1477, and 1478? 13 14 Α. Yes. 15 MR. OUSSAYEF: IBM offers those Exhibits as 16 well. 17 MR. HADDEN: No objection, Your Honor. 18 THE COURT: They're all admitted. (Above-referenced exhibits admitted into evidence.) 19 20 BY MR. OUSSAYEF: And thank you for your patience, Dr. Schmidt. I just 21 Q. have one more of these to talk about in terms of materials 22 23 considered? 24 Here, there is a reference to rolling back 25 computer code. Could you tell me what you mean by rolling

back computer code?

A. Sure. So Groupon as with most venders of software, have different releases over time. And so the code we looked at from the previous slide was really the more recent code, but I was also able to use what is called a source code control system to be able to roll back and go back in time and see what the source code looked like last year, two years ago, three years ago and so on back in time, much the same way that Windows has Windows 2000, Windows 7, Windows 10, different versions of the software.

So I was able to go back and take a look at the computer code for the relevant parts of my analysis to see how it behaved earlier than what it is doing today.

- Q. Dr. Schmidt, did that include source code exhibits PX-1492, 1493, 1495, 1496, 1497, 1501, 1502, 1503, 1504, 1505, 1506, 1509, 1514, 1518, 1519, 1520, 1527, 1528, 1529, 1530, 1531, 1532, 1533, 1535, 1536, 1537, 1539, 1549, and 1543?
- A. Yes.

evidence?

- Q. And 1542 as well, is that right, Dr. Schmidt? I might have missed a number.
- 22 A. That's correct. And 1542 as well.
- 23 MR. OUSSAYEF: Thank you.
- THE COURT: Are you offering those into

MR. OUSSAYEF: Yes, I would offer those exhibits
as well.

THE COURT: You can.

MR. HADDEN: No objection.

THE COURT: They're all admitted.

MR. OUSSAYEF: Thank you.

(Above-referenced exhibits admitted into evidence.)

BY MR. OUSSAYEF:

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Α.

- Q. Dr. Schmidt, did you review anything else in your review of materials here?
- A. Yes, I did. I also examined the testimony from
 Groupon's engineers and employees, Groupon's internal
 documents, and Groupon's technical responses that have
 occurred during this litigation process.
 - Q. Did you review any technical documents in this case to support your opinions?
- 17 A. Yes, I did.
- Q. Okay. Did those technical documents include PX-39, 46, 85, 106, 111, 176, 180, 182, 466, 625, 641, 713, 715, 717, 719, 721, 727, 760, 761, 762, 993, 1005, 1022, 1025, 1027, 1029, 1034, 1036, 1037, 1038, 1053, and 1093?
- 23 MR. OUSSAYEF: Your Honor, IBM offers those exhibits as well.
- MR. HADDEN: No objection.

Yes, that's correct.

1 THE COURT: They're all admitted.

2 (Above-referenced exhibits admitted into evidence.)

3 BY MR. OUSSAYEF:

- Q. And, finally, in your review of the various materials in this case, did anything else inform your opinion?
- A. Yes. I have been programming software since 1983 or so and I've worked as a professor for many years, as you have heard. I worked in various government agencies on advisory boards. I have also been involved with startup companies and have just done many different things. So I brought all that experience both professionally and academically to bear in this case.
 - Q. Now, did you work alone or were you part of a team in analyzing the various materials in this case? Because there was a lot there.
- A. I have a team working with me.
 - Q. And who is your team?
 - A. There were two members of my team. One member was Chris Thompson who graduated from Vanderbilt about nine years ago. He was a student of mine when he was there as an undergrad. He has gone on to found a startup company that makes ways of detecting accidents by using your smartphone rather than having to buy OnStar or something like that. So he has done a lot of work on computer software.
 - Q. How about Shawn Kercher?

Schmidt - direct

A. Shawn Kercher is someone who received his Bachelor's
Degree in Clarksville, Tennessee and got his Master's Degree
in Computer Science in Nashville. And he works as the Vice
President of Engineering and Product Development at a place
called Optio Labs, which is a startup where a lot of my
former students have gone to work over the years.
Q. Now, Dr. Schmidt, before we get into the details, I'd

- like to go over a summary of your opinions. Could you please tell us what your opinions are in this case?
- A. Yes. It's my opinion that Groupon's website infringes claims 1 and 2 of the '967 patent.
- Q. What is your opinion about Groupon's website and mobile app?
 - A. It's also my opinion that Groupon's website and mobile apps infringe claims 1 and 8 of the '849 patent, claims 51 and 54 of the '601 patent, and claims 1 and 5 of the '346 patent.
 - Q. Before we go into detail about Groupon, I'd like to ask you a couple questions about the patents in this lawsuit.

Can you tell us what we see here on slide 16, please?

A. So this is showing the first page of the so-called '849 patent. And as you may recall, it's a method for presenting advertising in an interactive service. And you

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can also see the inventor, Mr. Filepp, who was here earlier.

And it also shows when the patent was issued, which was July

4th, 2006 as well as when its effective filing date was,

which was July 15th, 1988.

- Q. And now, on slide 17, I see here you have the '967 patent. Can you tell us a little bit of an overview of that patent?
- A. So the '967 patent was also invented by Mr. Filepp who we just saw. And the title for this patent is method for presenting applications in an interactive service. The previous patent was about presenting advertisements. This is about presenting applications. This patent was issued on August 18th, 1998. And it was filed effectively on July 15th, 1988.
- Q. So what were the problems that the '849 and the '967 patents were trying to solve?
- A. So as we've discussed earlier, the issue that we always run into in computer networks is that if you have to send a lot of data from servers to clients, it tends to slow things down, it tends to make the system unresponsive, it takes to make it a long user experience, long wait times, waiting for things to show up.

Back in the early days of computing when Mr. Filepp and his team were working on these problems, the issue was you had to download the entire screen for every

Schmidt - direct

time the user wanted to interact with a computer. So the entire page or the entire screen would come down and be displaced, and that just turned out to take a long time. It made the users wait. Users don't like to wait very much.

- Q. And what are we seeing on the top right corner of slide 18 there?
- A. The top right-hand corner would be a picture of a server which would be connected over the network to reception system, or what we call a computer, a PC these days, and it is showing how the entire screen was being or the entire page was being downloaded in one fell swoop from the server to the client.
- Q. Now, I would like to talk about the solution of the '849 and '967 patent. Can you tell us what the solution was?
- A. So at a high level, what it involved instead of downloading an entire page, the pages would be broken up into smaller pieces which are called objects and various things came from that. One thing is you downloaded some of the objects and they were residing locally in your store. The store is connected to the computer local to your store. Then you wouldn't have to go back out and pay that latency overhead, downloading the content from the server back to the client again. So things could be retrieved much quicker. That was part of it.

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Then the other benefit was being able to think about the system in smaller pieces. So as we learned about with our monster example Mr. Filepp talked about earlier, you could pull things down and have the content be smaller pieces that were easier to mix and match.

- Q. What are the benefits from solving the problems '849 and '967 patent here on the slide 20?
- A. So there are a variety of benefits. I think in a nutshell, one of the key benefits is it makes it possible for people who are providing interactive services such as Groupon to be able to make the downloading time lower so it takes less time to get access to content and make the user responsiveness snappier, more interactive, so it's easier to get the information that you want without having to wait.
- Q. And what is the document you are citing to here, PX-180?
- A. This is a specification for something we'll talk a fair amount about today called the Hypertext Transfer Protocol or HTTP. And this specification I'm pointing here is talking about the goal of caching in HTTP, which is to eliminate the need to send the requests in many cases and the ability to eliminate the need to send full responses in many other cases. You don't have to pull everything back down. You can just pull down the pieces or parts we already have locally.

Schmidt - direct

Q. Does caching benefit both the users and the companies running the servers?

- A. Yes, absolutely. The users, their live is improved because things show up faster, and the companies who run the computer systems are improved because they don't have to have as many computers, they don't have to pay for the power to run those many computers, and they don't have to have networks that are as big and as full in capacity that would otherwise the case if everything had to come down each time.
- Q. Now, let's talk a little bit about the '601 patent.

 Can you please give us an overview looking at slide 21?
- A. So this patent has a longer title. It's Preserving State Information in a Continuing Conversation Between a Client and Server Network Via a Stateless Protocol. That's the title. And the patent was issued on October 5th, 1999. And it was filed on June 7th, 1996.
- Q. So looking at slide 22, can you tell us what the problem the '601 patent was trying to solve?
- A. So when computers talk over the Internet or over the web, they communicate over a protocol called HTTP, that hypertext transfer protocol that involves getting a request and sending responses. And HTTP itself is what is called a stateless protocol, which means it don't keep track of the previous history of request and responses. Each request and each response is treated separately and individually.

So we were trying to engage in an e-commerce shopping activity, let's say we wanted to browse for some shirts or we wanted to reserve the airline seats on an airplane or we wanted to be able to purchase a book or purchase face products or whatever. Then the problem that was faced at the time the patent was invented was how to keep track of the requests and responses so the users don't have to keep tediously reentering this information over and over again, when they engage in interaction on the network.

- Q. And looking at slide 23, what was the solution of the '601 patent?
- A. So the solution that Mr. Iyengar came up with was to encode state information in the request and the responses that go back and forth between the client and the server so it was easy to be able to match up which requests corresponds -- which next request responded to which previous next response, which request corresponded to another interaction. So that way it made it simpler for the computer system to be able to keep track of this information and particularly it became easier for the human to not have to tediously render this information all the time. So it was both about performance and personal productivity.
- Q. So, Dr. Schmidt, what are the images of the T-shirts here representing?
- A. This would be information about the e-commerce

Schmidt - direct

interaction, the state information that someone wants to browse shirts. Someone wants to find out, they say what color would you be interested in? The next communication:

I want to know about red shirts.

Then you get something back: What would the quantity be?

So it's just a conversation that takes place between the client and the server to carry out an e-commerce transaction.

- Q. So looking at slide 24, let's look in a little bit more detail. Can you explain a little bit more about the solution of the '601 patent?
- A. So as you see here, this is a picture from the patent with a little bit of extra stuff shown up on the right corner. And it's illustrating how the client and the server are interacting by sending these HTTP requests, that is the top one, and responses, which is the bottom one, and it is showing that within a given request, in addition to things called hyperlinks that identify the destination of the request and other information, there could be state variables or state information embedded in the request.

So if we're shopping for facial products, then we might have some state information that is used to indicate that this particular request is for some kind of facial product. And that would be state information that

1 would travel with the request itself.

- Q. So just to give us a little bit of context, when you refer to hyperlinks, and you are looking at web page, what are hyperlinks when you are looking at a web page?
- A. So if you are browsing a web page, you have undoubtedly seen the underlying links on the page. And if you click on those, those are actually what are called hyperlinks. When you click on one of those links, underneath is an address that looks kind of like what we're showing you there, and it will give the host name like Sienna.com, and it will also indicate what resource or what content you want to get access to like a particular news article or a particular deal or a particular reservation.

 And so the hyperlink is what is encoded that you click on in order to be able to send a new request to the server in order to be able to interact with it.
- Q. So what is the benefit of maintaining state information with conversations between a client and a server?
- A. It makes it easier for the client and the server to know what happened before. So a client asks for something about a certain reservation like an airline reservation, put certain dates in there. The information that comes back from the server to the client can let the client know that this next request to say book the reservation would be for

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those dates. So it's a way of matching up requests and responses in a conversation or a transaction that you engage in in an e-commerce environment.

- Q. So looking at the next slide, slide 25. Can you give us an overview of the '346 patent?
- A. So the '346 patent is a method and a system for a runtime user account creation operation within a single-sign-on process in a federated computing environment.

And Dr. Hinton, as we heard from shortly before, she is one of the inventors, the lead inventor on this patent. And this patent was issued on December 8th, 2009.

And it was filed on April 1st, 2005.

- Q. And remind us what the problem was that the '346 patent was trying to solve?
- A. So the problem here is the quick recap. Back in the day, if you wanted to interact with different services, travel sites, news sites, sport sites, shopping sites and so on, back in the older days, you had to keep track of a separate login account and password for every one of those different providers of those services, the service providers. And that just became very tedious and error prone because you forget the login name or login password, so it was just cumbersome to try to use.
- Q. And what was the solution of the '346 patent?
- A. As Dr. Hinton just explained, what her patent did was

Schmidt - direct

come up with a lightweight way of being able to create accounts on the fly or dynamically at the service provider, the entity that's providing the service, the airline reservations or news or shopping or whatever. And, therefore, the user didn't have to keep track of all these different accounts and passwords and the accounts could be created dynamically without the user having to do extra work.

- Q. What are the benefits of the '346?
- A. So it's typically about convenience. E-Commerce vendors such as Groupon are often interested in having people log in because when users log in as this quotation from a Groupon, Exhibit PX-85 describes, logged in users are more likely to complete their purchases than people who sort of brows anonymously. To make it more convenient, you have easier ways to log in without having to separately create an account for Groupon, they have a way of being able to use social sign in like Facebook and Google looking in like we see in here in order to make that login process more streamlined and lightweight.
- Q. Let's turn to Groupon. What is Groupon?
- A. So Groupon is an E-Commerce company that provides local deals, goods, travel bookings, and coupons to allow users to access these goods and services through their website, the browsers, either desktop or local browsers or

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mobile browsers as well as through mobile applications or mobile apps as we'll call it.

- Q. What exhibits are you using to show the various ways in which you can access Groupon's website or mobile applications in slide 29?
- A. So the desktop and laptop is PX-0964, the mobile websites accessing a website with a browser on our phone, mobile tablet, would be PX-967 and then Groupon's mobile apps such as the iPhone app is PX-969 and their Android mobile app is PX-980.
- Q. So we're going to talk a little bit about source code. So could you give us an idea of what source code or computer code is?
- A. Sure. So Groupon uses something called source code to power or run its website and its mobile apps. Despite our efforts for a long time, computers still don't really quite understand human language instruction, and so if we want to program the computers, we have to write those programs in computer code, code the computer understands which is sometimes called source code or program language code or things like that.

And so this computer code, this program is essentially a language, not a human language, but a computer language that instructs or tells the computers or the mobile devices what to do.

What are you showing here on slide 30 with the human 1 Q. 2 language on the left and the computer language on the right? So on the right-hand side I'm showing you just a 3 little tiny snippet, it's probably hard to read, but what 4 5 it's showing is a piece of computer code that is going to send a response from a server back to a client and this is 6 7 written in Java. And this computer code is the way you tell 8 the computer, the way a programmer tells a computer, here is 9 the information you requested, that's kind of what it does 10 if you were speaking to it as a human, here is the information that you requested, computers don't understand 11 12 simple commands like that so you have to instruct the 13 program with a computer code or source.

Q. So looking at slide 31, what are you showing here in PX-964?

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A. This is showing one way that Groupon's website allows the users to access their goods and services. By using a browser, and so hopefully we're all familiar with browsers. As you can see here we have a picture of the browser, up here at the top part you can barely see, I have blown it up towards the bottom is what's called an address bar, and that's where you type in things like URL, uniform resource locators, in this case we're typing HTTP, that's the Hypertext Transfer Protocol, colon//WWW.Groupon.com, that's an address that the browsers knows how to interpret, there

Schmidt - direct

is a lot of other software and hardware and everything else will route that over to the Groupon servers.

- Q. Looking at slide 32, can you tell us a little bit the HTTP protocol?
- A. I mentioned HTTP, I mentioned how we have a HTTP colon//prefix on the front of the URL, this is just stepping down a little bit further in detail and showing that there is a request that is sent out that uses the network which is called a HTTP request and it's a structured object that has status information, headers and bodies and so on. We'll talk a little bit about that in a second.

And that basically is an instruction for what the client wants the server to do on its behalf and then the server will process that request and then send a response, in many cases responses back eventually in terms of something called the HTTP response which is also something that contains certain data structure such as headers and message bodies and so on.

- Q. What are you showing here on slide 32 with again human language on the left and the computer language on the right?
- A. So the left hand I'm kind of showing what would happen if you went to say Groupon's website, and that would send a request over to, if you went to WWW.Groupon.com, like we saw on the previous slide, that would send a request over

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to Groupon's servers and it would reply back a response, several responses actually that would basically end up displaying what we see on the left-hand side, so that's showing the Groupon home page.

And I'm also showing the next PX-964, that's what you would see as a human, as an end user of this. I'm also showing something else which is in exhibit PX-965, and that's showing that with the response that's coming back from the server to the client, there is often formatted data, and that data is given a funny acronym, it's the Hypertext Markup Language, HTML.

There is more data that comes back from servers, particularly Groupon servers than just HTML, but HTML contains various formatting instructions that is used by the browser, or whatever receives this in order to display the results in the way that is laid out in the HTML.

- Q. So now looking at slide 33, how did Groupon's mobile apps work?
- A. So Groupon's mobile apps don't have a browser, they have a mobile applications, the native applications. And, again, these would be applications that you download from iPhones if you're an Apple user, Play store if you're Google Android user and so on, those native apps also make HTTP requests so they can make requests to a server and they can also get responses that come back, but they look a little

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different so you can see that the form factor in exhibit PX 969 is different from the web browser, they are a bit more constrained in many ways, less real estate on the screen.

For the Groupon mobile apps they also send back different kinds of data with the HTTP response. They don't typically send back HTML, instead they send other types of data such as Java script object notation or JSON, those are the examples of the types of data that would come back from the Groupon server back to the mobile apps on the left-hand side.

- Q. Now, let's go ahead and play a short video of Groupon's website to kind of give us a little more context of how to use it. Could you explain to us what's happening at each step?
- A. Sure. So we're starting out by entering in the Groupon URL for their web page, for their home page it's called.
- Q. And then what happens next here?
 - A. So you can see a bunch of things are displayed. Now we're going to go select the goods applications, so click to goods, and now you can see there are a bunch of goods.

 These are things that typically need to be delivered to you.

 We have dresses and looks like a hammock, shirts, vacuum cleaners, a whiskey decanter, some kind of bedspread, electronics, lawn chairs and so on, these are examples of

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goods. These are deals for goods that are going to be downloaded to the -- in this case to the browser from Groupon and displayed.

- Q. Now, tell us what happens in this next part of the video here?
- A. So now we're switching applications, we're leaving the goods application, we're going to the so-called getaways application. And what's listed here instead of electronics or dresses or shirts, these are deals on places to go. So you can go to Myrtle Beach, you can go to the Dominican resort, you can go to a pet friendly hotel in Tennessee and so on. These are various deals and they're drawing your attention to certain deals, this is giving you an overview of some of the deals that Groupon has displayed in its advertising through the getaways application.
- Q. Let's go on to the next individual yes and if you could tell us what happens here?
 - A. So now we're switching applications yet again, so now we're moving away from getaways and we're going to coupons.

 What you see here are essentially coupons that can be selected and instantly redeemed at the various merchants who are offering these coupons. Target, Amazon, Groupon, Bed, Bath & Beyond, and so on.
 - Q. Let's proceed to the next animation, and if you could, let me know what's happening here, please?

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A. So finally we're selecting the so-called local application or local deals, sometimes called nearby, but these are deals that are near you. In this case if you were in Nashville, at the very top it said Nashville, these are deals in Nashville, Jiffy Lube, Country Music Hall of Fame might appear here somewhere, there is the Smokey Mountain Alpine Coaster, these are things that will be around your geographic region and Groupon can tell you because it's keeping track of your location.

- Q. What happens in this next video here?
- A. So now we're actually selecting a particular deal and this transitions us to a view that displays details about that deal. So this gives you more information, gives you things like customer reviews, you can find out what it's going to cost, you can see what your savings will be, it says 32 percent off, and this gives you a little region of the display that Groupon calls the purchase coster, that's where you can select your options if they're not already default options which is the case here and you can either decide buy this if you want or you could give it as a gift or you could switch to another application altogether.
- Q. Tell us what happens when the user makes this next option here?
- A. So when we click the buy button that sends some requests to Groupon and Groupon sends back through HTTP and

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other data that's used in order to display essentially a login screen and this is what we call, I believe they call it the social sign on screen, social sign on.

So you have a couple of different options here. You can either log in with your manually created Groupon account, or you could use the social sign up or social sign in accounts process. If you look down at the bottom there, you'll see it says sign in with Facebook on the left and sign in with Google on the left. If you want to go with social sign in, you can select one of those. This is code that Groupon produces, it produces the screen and gives you these options.

Q. Let's go on to the next page. What's happening here?

A. Here we're clicking on signing on to Facebook, we'll talk about this in more detail later, but under the hood, some code that Groupon writes to trigger that login, and that causes a Facebook login screen to be provided. At that point, the user is logging in with Facebook and there is some single-sign-on potentially dynamic account creation taking place under the hood as we'll see later. And this is providing essentially the order display, so you can see this particular screen is going to give us the ability to enter in the credit card information, if you want to use a Master Card, a Visa, we can switch over to using PayPal if we wanted to.

When you're done filling in that information if we're still inclined to purchase, we can place the order and that will then take all that data that we just patched in and send a request over to the Groupon server.

Q. Thank you, Dr. Schmidt. Let's go back to your slide deck now.

Now, can you tell us what your expert opinion is about the '849 patent?

- A. Yes. So it's my opinion that Groupon infringes claims 1 and claim 8 of the '849 patent.
- Q. So let's turn to claim 1 of the '849 patent, but first, why are we looking at the claims of the '849 patent?
- A. So the claims define the scope of the invention. If you recall the video we watched at the very beginning talking about what are patents, one of the things the speaker mentioned was that patents essentially have a scope, and so they provide the patentholder, the inventor with certain property rights or as we might say in the case of software intellectual property rights so the patent claims
- Q. Were you here during opening statements?

intellectual property rights are.

A. I was.

Q. Did you hear Groupon's lawyer say that the key question for the jury to decide in this lawsuit is whether

or the elements that we'll talk about define what those

- 1 | these patents cover the entire worldwide web?
- 2 A. I did.
- 3 Q. Is that in your opinion the key issue in your
- 4 infringement analysis?
- 5 A. No, it's not.
- 6 Q. Why not?
- 7 A. Because these claims of this particular claim, claim
- 8 | 8 that we'll talk about in just a second, those claims are
- 9 defining the scope of the invention, and the scope of the
- 10 | invention here doesn't have to be the entire worldwide web.
- 11 What we're talking about here are the elements that appear
- 12 in this particular claim. That's defining a scope or the
- boundary of what's being claimed in this invention.
- 14 Q. Now, you might remember during Mr. Filepp's testimony
- 15 | that he was referring to how Prodigy was implemented. Do
- 16 you remember that?
- 17 A. I do.
- 18 Q. Do you figure out infringement by comparing the
- specific implementation of Prodigy to what Groupon does?
- 20 A. No.
- 21 Q. What do you do again?
- 22 A. So, two things. The first thing is to look at the
- 23 claims that are described here and understand what they
- 24 mean. And then apply that to what in this case Groupon is
- 25 doing. But there is a second thing that I also do that is

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very important and we'll talk a lot about that as we go through the next few slides.

which is precise definitions which the Court defines for some of the terms that appear in the claim. We'll talk about computer network and so on. The analysis that I do as the expert is to look at the claims and look at the claim constructions that are defined by the Court and apply that to analyze what the defendant is doing.

- Q. Let's move on to slide 36 here. So I see you color-coded the claim 1 of the '849 patent. Can you tell us what you're doing there?
- A. Sure. As you can expect by looking at these claims, they tend to be rather long so it's visually tedious to look at them in one chunk, so what I'm doing throughout my analysis is try to break them up into smaller pieces which we call elements and each element is typically color-coded so it's easier to tell at a glance what it is that we're talking about so we can focus our attention at each element at a time.
- Q. Then on slide 37, this first part of the claim is the preamble of the claim?
- A. That's right. It's the first element, sometimes called the preamble.
- Q. Let's talk about this first element of claim 1. Did

1 | the Court construe any of the terms there?

A. Yes. So as you can see, there is several terms.

3 They're underlined in the upper part, and then I list it in

4 the first column of the left-hand side. A term like

5 applications, computer network, the network portion, these

6 are all terms where the Court has given an official precise

7 definition.

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So this is an example, we'll talk about these, we'll talk about each one, but computer network when that term appears in a claim element, it's defined by the Court to mean two or more interconnected computers.

- Q. And while we're on that topic, Dr. Schmidt, did the Court construe computer network or the network as a specialized non-internet network?
- A. No. It's simply two or more interconnected computers, so there is quite a wide variety of networks that that applies to.
- Q. Let's take a look at slide 39. What part of the claim element are you addressing here?
- A. So this is element 1. This is the preamble and I'm just looking at the very first part that is highlighted in yellow. And it's the part that reads: A method for presenting advertising obtained from a computer network.
- Q. So let me show you a short animation. Can you tell us what is happening here?

A. Sure. This is just a visualization that shows how Groupon's servers on the right-hand side will present advertising, which we see on the left-hand side. Those are the things that kind of highlighted in yellow boxes. So the pizza, 45 percent off Jet's Pizza or extra \$10 off massages and facials and so on, those are advertising and they're presented over the network because they come from Groupon's servers on the right. And they travel across the network and show up on the computer's terminal, which is what is seen on the left-hand side.

- Q. So looking at slide 40. What are you showing here in PX-111?
- A. So this is kind of zooming in on what Groupon means by advertising. So this is from a document they wrote called the badging platform. And it is defining what a badge is. And a badge is essentially a visual emblem or some text that is assigned to a deal, like to the pizza deal, or it looks like some kind of aerobics deal or a Jiffy Lube deal. And so on that gives attention to a deal on various factors based on quality, performance, and personalization factors.

And if you look on the left-hand side, which is PX-964, you will see some examples highlighted in yellow that indicate where badges appear in the advertisements that Groupon is drawing attention to.

- Q. So now let's look at slide 41. What part of the claim elements are you dealing here?
 - A. This is the portion of the element that has the network including a multiplicity of user reception systems.
 - Q. What do you mean by "multiplicity?"
- A. So sometimes we use interesting words in patents like plurality or multiplicity. What that means in this case is more than one.
 - Q. And what are you showing here with reference to PX-964 on these various computers?
 - A. So PX-964 is showing a multiplicity of, in this case, desktop computers or laptop computers that are connected via a network to Groupon's servers which are basically obtaining the advertising of what we presented. So we're focusing particularly here on the multiplicity of reception systems or user reception systems, which are just desktops or laptops in this case.
- 18 0. **Now --**

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- 19 A. And it's going across the network.
 - Q. And does PX-1053 tell you anything about how many users there are?
 - A. It gives us a pretty good sense of the multiplicity, the scale of the multiplicity of Groupon's users. This is another Groupon document that says there are roughly 50 million active customers worldwide. So that certainly would

1 be more than one.

- Q. So now looking at slide 42, what part of the claim element are you addressing here?
- A. So now we're moving on to the next part which is

 highlighted in yellow and this part says: at which

 respective users can request applications, from the network,

 that include interactive services.
- Q. And remind us, did the Court construe the term
 "applications?"
 - A. Yes. "Applications" is also a term that has been given a formal meaning by the Court, formal definition, and it's defined as "information events composed of a sequence of one or more pages opened at a screen."
 - Q. So just to orient us a little bit. What is does the gavel mean when we see that on the slide?
 - A. So when we see a gavel on a slide next to word that is typically underlined, it is usually indicating that that particular term or word, it might be a phrase in some cases, has been given a special meaning by the Court. It has been construed. And so the Court has formally defined what that term means. So it's just a way for us to remember when the word "application" appears, what the Court has defined that term to mean in this case.
 - Q. Now, looking at PX-964, did you find any information events on Groupon's websites?

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- A. Yes. I'm identifying four of them here which are:

 local, goods, getaways, and coupons, which incidentally was
 shown on the videos a moment ago.
 - Q. So moving on to slide 43. Are you still dealing with the "applications" term here?
 - A. Yes. We're particularly focusing on the "information events" portion of that construction.
 - Q. What does PX-601 show you about that?
 - A. PX-601 is an internal Groupon architecture overview document. And it's explaining what their various applications do. So they call these things channels, but you can see that the local channel is an application that sells vouchers which are traditionally fulfilled using a voucher.

We see the goods channel is an application that sells physical items that require some kind of complex fulfillment from a warehouse, like electronic device.

The getaways channel is an application that sells travel reservations which are fulfilled by third-party systems, reservation systems.

And the coupons channel is an application that offers free coupons which are instantly redeemable online.

- Q. Now, PX-601, what kind of document is that? Where do you find it?
- 25 A. So this would be a document that would have been

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produced in the case, and it's one of the exhibits that comes from Groupon.

- Q. Now, I see you have a different part of the "applications" highlighted here. What part are you analyzing?
- A. So that will kind of give you a sense of what an information event would be, like goods, local, getaways and so on. We're now going to talk a bit more about the rest of the construction which is "composed of a sequence of one or more pages opened at a screen.
- Q. So I'm going to play a little video here, or I guess click on to the next part of the slide here.

Can you tell me what happens when you click on "view deal" on a particular deal?

A. Sure. Can we go back? It's probably easier if you go back to show what is happening.

So we're in the locals application, and now we want to find out more about the 45 percent off at Jet's Pizza deal. So we click the "view deal" button.

- Q. So I'll click here. And tell me what happens, please.
- A. And that will then open up another page on the screen. So, remember, we have a sequence of one or more pages that are opened to the screen. We started with essentially the locals application, and then we clicked on

it and it took us to a new page. So it's the second page in the sequence of pages. And this page is now opened at the screen. And this is providing us more information about the deal. We have different options. We can go to different places that will honor the deal in Nashville.

Q. So now let's go on to slide 46.

What part of the claim element are you addressing here?

- A. This part is kind of the last part, and it says, "the respective reception systems including a monitor at which at least the visual portion of the applications can be presented as one or more screens of display."
- Q. So does the claim say you have to just present to one screen?
- A. No, it basically says that there is a visual portion of the application, which you see in the left-hand red box.

 I'll come back and talk about that more in just a second.

But that is the visual portion. And that as you see in the claim, it says the visual portion of the applications can be presented as one or more screens of display. So it doesn't all have to show up on one screen. It can show up as we see here as a sequence of screens or a screens of display, plural display.

And what is significant about the left-hand box, the one that is labeled PX-964, is this could be quite a

long, visual portion might be quite long, might take many screens. So I'm kind of showing in the middle, we're not showing every piece there. But if you were to actually look at your computer, you could sit and scroll down through the screens of display and see the entire visual portion of the application.

- Q. Is that what we were seeing in the video earlier?
- A. Yes. When I was showing the video earlier, we're scrolling through it and showing you could go up and down and see different deals that were further down in the page.
- Q. So Dr. Schmidt, in your opinion, has Groupon performed a preamble of the '849 patent, claim 1?
- 13 A. Yes, that's correct.

Q. Let's move on to the "structuring applications" portion of claim 1 of the '849 patent.

Looking at slide 49, did the Court construe any terms here?

- A. Yes. In fact, almost I guess the entire element has been construed. The entire element is a claim term that the Court has given a formal definition to. And I'll be explaining this in a second so I won't read it to you but we'll come back and break it down piece by piece.
- Q. And looking at slide 50, did the Court construe any other claim terms in this element?
- A. Yes. So in addition to construing the entire

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element, the Court has also construed certain other parts which we have seen before, like "applications," "computer network," and so on. And something called "portion" which we will also see shortly.

- Q. So let's look at slide 51 here. So can you remind us what you are showing here with the gavel?
- A. Sure. So the gavel again is just sort of a synopsis or it's the definition of the construction that the Court has given for this claim element. So the claim element as far as "structuring application" has been construed or found as "formatting applications so that they may be presented through the network at a first area of one or more screens of display."
- Q. And what is the area you are shown here on slide 51?
- A. So in Exhibit PX-964, I'm showing the first area which is actually just a portion of that first area.

Because, remember, the first area is the visual portion of the application so that will actually continue down to the end. That is what those little red arrows mean at the bottom and continues on. So this is essentially formatting the application so the application can be presented in the first area of one or more screens of display. We're just looking at a piece of that deal.

Q. So let's look at slide 52 here and talk a little bit more about the "formatting" element.

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So what are you showing here with human language on the left and computer language on the right. So the left-hand side is more or less what we saw on the previous slide, just kind of zoomed out a little bit so you can see more of what is going on. You can see a few other pieces I'll describe in a second. So that is the first area we're talking about. And on the right-hand side is a snippet of this Hypertext Markup Language, HTML, and that is what is used to actually format the application so it can be presented in the first area of one or more screens of display. And if you look at that, you will see that there is a couple things that are circled in red. The overall HTML document or HTML message is formatted in red just to show that that is the entirety of it. We're just showing a piece of it, but it's the entirety of the whole thing. And then you can also see some other things called divs, and I'll talk more about divs in just a second. THE COURT: Mr. Oussayef, I think it might be a good time to take a break. MR. OUSSAYEF: Okay. Ladies and gentlemen, we'll give you THE COURT: your afternoon break, and we'll get you back in a little bit.

(Jury left courtroom.)

1 THE COURT: We will be in recess. 2 (Brief recess taken.) 3 (Proceedings reconvened after recess.) 4 5 THE COURT: You may bring the jury back in. 6 (Jury returned.) 7 THE COURT: All right. We're ready to proceed. 8 Mr. Oussayef. 9 MR. OUSSAYEF: Yes, Your Honor. Thank you. 10 BY MR. OUSSAYEF: 11 Dr. Schmidt, let's resume with the "structure and 12 application" element. So here on slide 53, can you tell us 13 what you are showing here with the div part of the screen 14 here? 15 Yes. So a div is an element of an HTML document or 16 HTML message that is used to format or an application is 17 used by Groupon to format an application so that they can be presented in one or more screens of display, and divs are 18 19 used in conjunction with elements like div ID, div class, 20 which help to describe the way in which the document should 21 be displayed and formatted and displayed. 22 And which div are you referring to specifically in Q. 23 slide 53? So in Exhibit PX-965, it's the div ID equals global 24 25 dash container. It's the one in the top in that smaller

rectangle red box. And that starts there and it continues
on the way down until we hit the bottom where it says, less
than slash div greater than. So that's ending that div.

And that is basically telling -- it's formatting the
application so it will be presented in the visual portion of

- Q. So looking at slide 54, is it your opinion that Groupon performs claim 1 of this element of claim 1 of the '849 patent?
- 10 | A. Yes, that is correct.

the display.

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- 11 Q. Let's move on to the "structuring advertising"

 12 element. So looking on slide 56. Did the Court construe

 13 any terms in this element?
 - A. Yes. There is a couple of terms that are construed here. They're fairly long so I won't read them now. We'll discuss them as we go through the analysis.
 - Q. And looking at slide 57, are there any other terms that the Court construed?
 - A. Yes, there is some other ones that you have already seen like "applications," "computer network," "portion."

 And there is also a new one called "objects" which we'll talk about in just a moment.
 - Q. So looking on slide 58. What portion of the element are you addressing here?
- A. So this is the first part the highlighted part of

applications."

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element B which has been construed or defined as:

"formatting advertising for potential use with a plurality

of applications, through the network, at a second area of

one or more screens of display concurrently with

Q. And then what are you showing here with the human language on the left and the computer language on the right?

A. There is a couple of things to show here. So let's kind of break it down.

First, just to connect us back to the previous element, Element 1A we talked about. I'm showing once again the first area which is on the left-hand side of the area that is in red labeled "first area." And I am just reminding everyone on the right-hand side on the computer language part, the so-called HTML part, that is still the global container div so that is kind of enclosing the HTML file.

And now I want to draw your attention to the blue portion. So on the left-hand side, you can see there is a blue portion which is labeled "second area." And that is where the advertising is being formatted at the second area in one or more screens of display. And it says "concurrently with applications." That just means that it's also being shown at the same time that the first area is being shown.

And if we zoom in on Exhibit PX-965, we can see the blue portion which I apologize is a bit hard to read.

So I've expanded a few pieces that are important to note.

in there is more formatted HTML using divs once again except in this case, rather than div ID equals global container, which is the part we see in red at the top, now it says div ID equals pull dash cards. And then what follows from all that is essentially the HTML that's been formatted or structured so that can display the advertising in the second area. And you can see how the second area is different from the first area it's a different part of the display.

Q. So let's go on to slide 59.

Now, what part of the element are you addressing here?

- A. So now we're dealing with the final part of Element B which is defined as "wherein structuring the advertising includes configuring the advertising as objects that include advertising data."
- Q. So what are you showing here with reference to PX-964 and 965 kind of going from the Groupon servers to the left?
- A. So Groupon servers are sending back various responses to requests that come from the client. And as we talked about earlier, to quickly recap, these are so-called HTTP responses which means they're responses that are defined as

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part of the HTTP specification, the stateless protocol, and what we're seeing here is that these responses correspond to different advertising elements.

So we can see that we have the pizza image. We have the Jiffy Lube image. We have the aerobics image. We have a portion of HTML that describes the advertisement portion with the trending of the price and so on. And each of these things comes back in separate pieces. And those objects include advertising data which are the pictures. And Groupon then configures the advertising. It is structuring the advertising to include objects that have this advertising data.

So if you look on the left-hand side, the way in which they're putting together the view in the second area is to take the responses that are coming back from the HTTP responses in the server that Groupon is serving, and these contain advertising data, so we're going to kind of focus on what it means to have advertising data that includes, advertising objects that include data.

- Q. So, Dr. Schmidt, looking at slide 60, can you tell us about your analysis of the term "objects?"
- A. So as you can see here, we're underlining "objects" which is part of that highlighted element we just -- a portion the element we just described. And an "object" is construed by the Court, defined by the Court as simply being

"a data structure" which just means that the data is structured in some form.

- Q. And looking at PX 180, what did that tell you about the HTTP responses?
- A. So HTTP responses are formally defined in the

 Hypertext transfer protocol specification, or the HTTP 1.1

 specification which is PX 180. And what we see -- that's on

 the left side. What we see in the middle is a snippet from

 that document, and this describes, or defines in the

 specification how a response is structured.
 - Q. And how does that correspond to what we see on the right in PX 965?
 - A. So what we see on the right in 965 is a snapshot of an actual server response that comes back from Groupon's website. So you can see here that we get back the status which in this case is 200, okay, which just means that it was able to be downloaded successfully, and that's part of the response data structure status line. You see status line, there is a red line pointing to that response. There is also a response header which is part of the specification, and if you look on the right-hand side you'll see that there is a bunch of headers such as path control header, such as links and so on, we'll talk more about those in a second.

The final piece of this data structure, the HTTP

object that I'm showing here is the message body which in this case would correspond to the data that makes up the image, so the image of the piece, for example, which has a certain length in bytes.

- Q. Now looking to slide 61, is it your opinion that Groupon performs the structuring advertising element of claim 1 of the '849 patent?
- 8 A. Yes, that's correct.

- Q. So now let's look at the selectively storing element. So in slide 63, did the Court construe any part of the selectively storing element?
- A. So the Court construed all of that element and they also construed a piece of it which was the term objects that we talked about earlier.
- Q. So looking at slide 64, what part of the Court's construction are you addressing here?
- A. So the Court's construes this entire claim element as pre-fetching advertising objects and storing at a store established at the reception system in anticipation of display concurrently with the application. For this part I'm focused on the yellow highlighted part which says pre-fetching advertising objects.
- Q. I see here on slide 964 it says first way of pre-fetching, can you tell us what you're referring to there?

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A. There are a number of ways which Groupon pre-fetches, the first which we'll talk about which is pre-fetching HTTP responses to the user's computer before the images are displayed.

- Q. So Dr. Schmidt, could you please watch the animation and tell us what's going on?
- A. Sure. So the user is navigating to the locals page, the locals application.
 - Q. And what happens when the user navigates there?
 - A. When the user navigates there as you saw with the animation, that page will include a bunch of H references or hyperlinks that are then downloaded from the server and stored in the local store. This is sometimes called the cache. It's essentially an object store that stores objects that are part of the user's reception system or user's computer.
 - Q. Why does it represent the images there in black and white instead of color?
 - A. The part that's in color is the part that's actually currently shown on the screen display that's up there at the moment, that's the pizza image. The other images have been downloaded and are in the store, but the user hasn't actually scrolled down in the page in order to be able to see them yet.
- Q. So I'll play another animation. What's happening

here, Dr. Schmidt?

- A. As the user scrolls down in the page, those images are then displayed and these are the same images that have been pre-fetched or fetched in advance of being able to be displayed. So we're seeing that the images that are showing up there are pre-fetched, they're stored in the store and then as we scroll down, those images become visible.
- Q. Let's look at slide 65. I see you're referring to a second way of pre-fetching. Can you explain what you mean there?
- A. Sure. Let's assume for sake of an argument that the user has navigated back to Groupon's home page. Now once you're there after doing other things, you may say I want to go back and look at the deals again, they're about to click on the local application, they're going to invoke the local application.
- Q. Okay. Let's see. So what happens here?
- A. So what's happening here is that that image of the pizza was downloaded earlier, we saw when it was downloaded when the original locals page was downloaded. Now we are returning to the local page again, and that image is now displayed again because it had already been pre-fetched in anticipation of being displayed when we go back to the local deals page again. Now that we're back to the local deals page, we didn't have to go back out to the network and

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download the image again, it was simply displayed out of the local store that's connected to the clients computer.

- Q. Looking at slide 66, what's the third way of pre-fetching?
- A. So this is yet another way that Groupon will pre-fetch the HTTP responses to the user's computer before the images are displayed.
- Q. I'm going to show you another animation. What's going on here, Dr. Schmidt?
 - A. This time we're going to go to the coupons application. You can see what's happening is in the coupons application there is something called a carousel application. As you notice a bunch of images were downloaded from the server and stored in the object store, and one of those images is displayed initially so the one that says Forever 21. So Forever 21, that's the colored image in the object store that's the one that's being currently displayed, but the other images which are in the cache have not yet been displayed.
 - Q. I'll play the next step in the animation. What's going on here?
 - A. Now we're cycling through every tab in the carrousel ad, as we click on that tab it's displaying those pre-fetched images one at a time, just have it go from left to right. I could have gone in a different order and it

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would have displayed the images in the way that I would have clicked.

- Q. Looking at slide 67, what part of the claim construction are you addressing here?
- A. So now we talk a bit about how Groupon pre-fetches these advertising images. I'm going to talk about how they're stored at that object store that's established at the reception system in anticipation of the display with the application. Just to give a context the reception system is the client's computer and the store is the cache that's part of that client's computer.
- Q. So looking at slide 67, what are you showing in the middle there where there is a server response and something boxed in blue?
- A. So the middle part is actually a snapshot, a capture using one of the Chrome Death tools I mentioned earlier.

 It's essentially a snapshot showing the server's response that came from the Groupon server on the right and is now been downloaded and stored in the local store on the left.

And so what I'm showing is that in Exhibit PX 1433 and PX 1477, those are the parts in the upper right portion. This is actually a snippet of code that Groupon writes in order to set the cache control header. That is what that thing is called if you look very closely at the middle of the top, it says cache-control, then it says

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public max age, and then it has a value and what that's doing is that is code that Groupon writes to set the value of that cache control header. And then that gets sent from the network, over the network from the server, you can see where the cache control header actually is displayed in the blue outline box in the middle where it says cache-control, public maximum-age, equal, 658183. I realize it's hard to see that. That's the time in seconds from when the object is received in the store for how long that pizza image should be cached before it's considered stale.

- Q. So let's look at slide 68. What does PX 180 tell us about the cache control interface?
- A. This is describing, this is a snippet from the HTTP specification, Hypertext Transfer Protocol Specification, it's explaining how the cache control header describes specific directive to cache. If Groupon sets that header, then that header is used to control how the advertising objects or whatever is cached will be stored at the store that's located on the user's computer.
- Q. In looking at slide 69, you have some testimony from Mr. Dunham, a Groupon employee. What does he say about what determines whether something is stored?
- A. So Mr. Dunham, who is the Groupon's corporate witness, is answering the question, "What factors determine whether the summer mega sale advertisement here is cached at

1 | the user's device?"

That's that deal. He said, "What factors? I think the caching instructions that are delivered in the header in the HTTP response."

And then he's asked, "Are there any other factors that you're aware of?"

And he replies, "No."

- Q. Now on slide 70, I like to talk about whether caching can be disabled. Let's start first with Web browsers. Can caching be disabled on a user's Web browser for desktop applications?
- A. It's possible for Web browsers to have their caches disabled on desktops and laptops, although that's rarely done.
- 15 \ Q. What is the default setting for caching?
 - A. So the default setting for caching is to be cached, that's the default setting.
 - Q. And roughly how many users are aware that they can disable cache?
 - A. Very few people even know you can turn caching off.

 And of those few who do, even fewer actually disable it

 because it actually makes the experience slower because

 you're waiting for things to pull up.
 - Q. And does Dr. Weissman dispute your opinion that caching is enabled by default on desktop computers?

A. No, he does not.

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- Q. Now, on slide 71, we talked a little bit about in
 general users using whether they enable caching or not. How
 about Groupon employees, have you seen any evidence of what
 they do?
- 6 A. Yes, I do.
 - Q. What do we see here on slide 71?
 - A. This is testimony from, or deposition from Aileen Sandridge who is the vice-president of engineering at Groupon, and she is asked whether she's ever visited Groupon's website as part of her job responsibility to which she replies yes and she also replies yes to the question, have you ever visited Groupon's website without disabling cache as part of your job responsibilities and she agrees with that.
 - Q. Let's look at slide 72. So we talked about desktop
 Web browsing. Now, let's talk a little bit about using
 Groupon services on mobile devices. Can you disable caching
 in that scenario?
 - A. No, you can't.
 - Q. How did you figure that out?
- A. Several different ways. First I inspect had the
 source code, Groupon's source code. I also took a look at
 the various devices such as iPhone and Android that I had
 and tried to find a way to disable caching for the mobile

apps on those devices and there was no way to do that. And so as a result, and then also just reading the literature, doing searches, I was unable to find anyone being able to explain how to do this programatically, so as a query.

So therefore I concluded that caching could not be disabled on a mobile devices.

- Q. And again, let me ask you about Dr. Weissman, but first, maybe I didn't ask you before. Who is Dr. Weissman?
- A. Dr. Weissman is the expert for Groupon.
- Q. Does Dr. Weissman dispute your opinion that caching cannot be disabled in mobile devices?
- 12 A. No, he does not.

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- Q. So in your opinion, does Groupon perform the selectively storing step of claim 1 of the '849 patent?
- 15 A. Yes, that's correct.
 - Q. So I would like to ask you about your opinions specific to the mobile website and mobile applications. What's your opinion there?
 - A. So my opinion there is as with the desktop or the laptop version of their website, the mobile website and the mobile apps also infringe claim 1 of the '849 patent.
 - Q. So looking on slide 75, what are you showing here with the images of the mobile devices on the left?
 - A. This is essentially showing that the mobile devices including the mobile Web browsers as well as the mobile data

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apps download, advertisements from Groupon servers, they display it, so it's essentially the same, it's just the form factor that the information is displayed in is different than on a Web browser that might appear on a desktop or laptop.

- Q. In looking at slide 76, do the mobile devices also have a first area and a second area?
- A. Yes. As you can see here the form factor is a little more different, they're more constrained because there is less area of the screen, but you can see we have a first area which is the area where the application is structured and that's showing red from the mobile website and then the IOS mobile applications and the Android mobile applications on the middle and the right, and then in blue I'm also showing that we have second area which is where the advertisements are structured and formatted and displayed.
- Q. What exhibits did you look at to find that out?
- A. This for the mobile website, Groupon's mobile website is Exhibit 964, for the mobile IOS mobile applications it's Exhibit 969, and for the mobile Android app it's Exhibit 980.
- Q. So now let's go back to selectively storing. What is your opinion about Groupon's mobile website looking at slide 77?
- A. So Groupon's local website selectively stores the

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objects on the device in the same way as it works on the desktop and laptop version, in particular as we see in Exhibit 968, the cache-control header information that's set on the server to indicate how long advertising data, advertising images and so on should be stored on the mobile device, and that's communicated back and stored on the cache for the mobile Web browser, which is shown in exhibit PX 967.

- Q. So now on slide 78, do Groupon's mobile applications pre-fetch in any other way?
- Yes, they pre-fetch in a particularly interesting Α. So when a user starts up the mobile application as well as other times during the day, the mobile apps will actually go out and pre-fetch information without the user ever having to do anything else other than having to turn the applications on. As you can see in exhibit PX 970 which is showing what the code looks like on the iPhone device, we see some code that basically Groupon wrote which will pre-fetch image URLs, see it's going to pre-fetch the images and you can see the code that they wrote there on that mobile device, saving the messages to the cache, you can see save image to cache. That's indicating how they will go out and pre-fetch these images and store them. Of course the reason they do that is because it makes the user's experience much more responsive if when they start things up

1 | they have already downloaded some of the deals.

O. That's exhibit PX 1388?

- A. That is correct, the source code is PX 1388, showing the pre-fetch images, URLs and save image.
 - Q. Looking at the bottom of slide 78. What are you showing on the bottom opposed to the top?
 - A. The top part was the iPhone source that Groupon has, the bottom part is from the Android code that Groupon wrote, and what we're showing here is that it works in much the same way. The language is slightly different, some of the names are slightly different, but you can see how the code that Groupon wrote is going out and pre-fetching images and it's going to go ahead and warm up the image cache, so it's doing things with the caches and the images to pre-fetch them before they're used.
 - Q. And what exhibits did you look at in terms of source code for the Android functionality?
 - A. So the Android source code is in PX 1203 and in PX 1458.
 - Q. So did you look at any testimony that indicates that Groupon actually does pre-fetch as opposed to just having code that pre-fetches?
 - A. In addition to looking at the source code, I also reviewed testimony from Aileen Sandridge again, the vice-president of Groupon, and she agreed that with regards

to Groupon's mobile application, images are pre-fetched to

the user's mobile device before being displayed to the user,

so she was asked that question, she agreed yes.

- Q. Looking at slide 80, is it your opinion that Groupon's mobile website and mobile apps infringe claim 1 of the '849 patent?
- A. Yes, that's correct.

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- 9 So, I would like to ask you a little bit more about
 10 say during his opening statement that the '849 patent is
 11 about presenting advertising separate from the application
 12 area?
 - A. Yes, I heard him say that.
- 14 Q. Did the claim terms say anything about separate?
 - A. No, if you take a look at the claim elements that are up here, if you take a look at the Court's constructions that he walked through when we took at each of the claims one at a time, it never talks about -- the phrase separate never shows up.
 - Q. During Mr. Filepp's cross-examination, were you here in the courtroom?
- 22 | A. I was.
- 23 Q. And we heard a lot about page template objects. Do
 24 the claims say anything about page template objects as
 25 opposed to just objects?

A. No, they don't. They just talk about objects. And neither do the Court's construction of the word object.

- Q. Now, looking at slide 81, what's your opinion about claim 8 of the '849 patent?
- A. So my opinion is that Groupon infringes claim 8 of the '849 patent.
- Q. And now we're looking here at claim 8 of the '849 patent on slide 82; is that right?
 - A. That is correct, yes.
- Q. And now, do you remember that counsel for Groupon said during his opening statement that the '849 patent was about presenting advertising in an area separate from applications like we were just talking about?
- 14 A. I do.

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- Q. Does claim 8 of the '849 patent even use the term "area" at all?
 - A. I don't believe it appears in the claim elements that we're looking at here shown on the screen, and nor do I believe it appears in the Court's construction of those claim terms.
- Q. Okay. So now looking at slide 83 here. Are we going to walk through this claim as well?
- A. That's correct. We'll walk through one element of the claim starting with the preamble of the first element.
- Q. So let's start with the preamble here on slide 84.

1 And then if we move on to slide 85.

Did the Court construe any terms in the preamble of claim 8?

- A. Yes. There are several times which we have seen before, "applications," "computer network" and so on.
- Q. Now, on slide 86, what are you showing here with claim 1 of the '849 patent compared to claim 8 of the '849 patent?
- A. So what you can see is the preamble of claim 8, which is on the right-hand side, is very, very similar to the preamble of claim 1. In fact, it's basically a subset of it with just a small phrase change. Instead of saying "obtained from a computer network," it says "in a computer network."

So essentially the preamble of claim 8 is met for the same reasons that the preamble of claim 1 of the '849 patent is met.

- Q. Now, looking at slide 87. I understand you will be talking about a slightly different method for claim 8. What type of method for presenting advertising are you talking about here on slide 87?
- A. So this particular method will be describing the use of something called the relevance service or sometimes known as the relevance platform. And you can see a short description of the relevance service/platform here which is

1 an excerpt from one of Groupon's architecture overviews. 2 PX-641. And they basically explain that this relevance 3 platform service is a collection of components that are responsible for selecting and ranking deals for endusers. 4 5 And then they go on and kind of liken it to the way in which things are laid out in a grocery store where relevance is 6 7 like the shelf space and the weekly circular. It advertises 8 the items to the customer by putting the items in the best

Q. So is it your opinion that Groupon performs the preamble of claim 8 of the '849 patent?

place to increase the likelihood of purchase.

A. Yes, that's correct.

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Q. Let's talk about the "compiling data" on claim 8 of the '849 patent.

So looking at slide 90. What are you showing here with the local deals box here in purple?

A. So this is illustrating a couple things. I'll walk through them one step at a time. In a nutshell, it is showing that Groupon compiles data concerning the user, the prospective users, people using their mobile website or mobile apps, and these things that they're compiling include the user's identity, location, and/or the applications they have selected. So the pictures illustrate each of those things.

For example, user's identity. You will see

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later when you do sign on when you do a purchase or access your profile, you provide your identity so they know who you are. So that is a way they're able to get access about the user's identity.

They also are able to get access about the user's location. There is a couple of ways that that works:

If your using the desktop version, which is shown in PX-964, you look at the red box in the upper right-hand corner, it says Nashville. So Groupon is able to keep track of where your computer is running so they know you are in Nashville for local deals versus in Wilmington for local deals.

Likewise, it's also possible to tell Groupon to tell you, give it permission to use your GPS location for your mobile device.

And also shown by the local deals application is that they also are able to compile data about the applications you select. So whether you are on the local application or coupons or getaways or whatever. So here we're showing local deals, but it would be the same for the other applications, too.

- Q. So looking on slide 91. Are there any Groupon technical documents that support your opinion about compiling data?
- A. Yes. Groupon has a document about a system I believe

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called Feynman, and it is shown in since PX-717. And in that document, there is the diagram that we see here. This gives you a view of the relevance services framework which you should keep in mind, it is also called the relevance platform.

But the relevance service framework takes input with various things about the users. So, again, it's a little hard to see. But if you squint and you look at the yellow box that is labeled "input," you will see user identity, user location. You will see high level context, such as channel or vertical, what we have been calling application, and so on. And then down below, you will see how they talk about how they create a user profile by compiling these user data, this user interaction data and so on.

So they compile the data about the various prospective users, and then they can use this to do various kind of ranking and stacking of responses.

- Q. In terms of the architecture document on the left-hand side, is that PX-713?
- A. I'm sorry. PX-713 is the -- PX-713 is the architecture document with the relevant service framework, and the quote I have down below is PX-717.
- Q. Thank you. So looking at slide 92, is it your opinion that Groupon performs the "compiling data" element

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$1 \parallel$ of claim 8?

- A. That's correct.
- Q. Let's go on to the "establishing characterizations" element.

So looking on the slide 94, what are you showing here with reference to PX-713 again?

A. So this is dealing with the claim element establishing characterizations for respective users based on the compiled data.

So we already talked about the input data that comes in things like location, things like identity, and applications that are being selected and so on.

And so this is also going and looking at the Feynman document, which is PX-713. Thank you for catching my mistake before. 713 is the Feynman document.

And if you take a look at the architecture diagram in there, you will see there is something called the relevance/service APIs. And these are what allow Groupon to be able to help establish the characterizations for the respective users based on that compiled data we just talked about.

So PX-717, which is shown on the right-hand corner, is talking about how the information is compiled, is basically used in terms of scores for so-called attributes.

And I will explain what attributes are in a second.

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Q. So looking at slide 95, were there any other parts of
PX-717 that was relevant to your analysis of attributes?
A. Yes. This was giving some examples of the attributes
that Groupon uses to establish these characterizations for
the users based on the input data that they collect. And
you can see in the yellow highlighted column portions,
various examples of these attributes.
So, for example, one attribute is gender.

So, for example, one attribute is gender.

Male/female. You can see it is all important. It must be
very important to their ways of serving out the element.

You can see age group. So age is from toddler to adolescent to middle age and so on.

You can see location where we have the zip code, cities: New York City, San Jose.

You can see income level. What is the guess of the person's income based on information gleaned from Experian.

Then there is another vertical which is essentially of the application such as local, goods, travel, coupons and so on.

- Q. Did you look at any testimony that supported your opinion on establishing characterizations?
- A. Yes. So Aileen Sandridge, who is the Vice President of Engineering at Groupon was asked the question: How does Groupon utilize a user's location in determining what deals

1 | to display to them?

And she said: We use their location to determine which deals are candidates for display based on their vicinity to the user's location.

So that is a good example of taking that compiled user data about location and then using that to serve up the local deals or nearby deals.

She was also asked if Groupon used the verticals that the user selects -- these are the applications -- to determine in part what deals the user are shown?

And she said yes, and he explained. An example would be going to the home goods page -- sorry -- the goods home page. That would cause Groupon to filter the selection to be exclusively good deals. So you wouldn't get getaway deals on the goods page, for example.

- Q. So looking at slide 97. Is it your opinion that Groupon performs the "establishing characterizations" element of claim 8 of the '849 patent?
- A. Yes, that's correct.
 - Q. So let's go on to the final element here,
 "structuring advertising." So did the Court construe any
 part of this part of the claim in slide 99?
 - A. So the final part at the bottom, which starts out, "storing a predetermined amount," underlined, that part is construed and it is construed to be the "plain and ordinary

1 meaning."

- Q. So let's look at the slide 100 here. What part of the claim element are you addressing here?
- A. So we're dealing with the first part which is
 highlighted in yellow. This is the part that says:
 "structuring advertising so that it may be selectively
 supplied to and retrieved at the reception systems for
 presentation to the respective users."
 - Q. So then now looking at the human language on the left and computer language on the right. Can you tell us what is going on here on slide 100?
 - A. So if you recall, we talked about how Groupon lays out advertising. I'm showing an example of that inside the blue rectangle on the left-hand side. That is kind of the human language part that's showing how advertising is being presented.

And on the right-hand part, I'm showing you the portion of the downloaded HTML file that structures that advertising so it can be selectively supplied to and retrieved at the reception system so we can basically present it, Groupon can present it in the blue part on the left-hand side.

- Q. So looking at slide 101, I see here now you have an iPhone. Can you explain what is going on in slide 101?
- A. The previous slide, we're just showing how things

work for their desktop website. And this is showing how information is structured, advertising is structured so it can be selectively supplied to and retrieved at the reception system for presentation to the respective users when the reception system is a mobile device. In this case, it is a Groupon mobile app rather on an iPhone.

If you can see very closely on the right-hand side the way in which this is done is by using JSON or Jobs Object Notation format. But it is just another way of structuring things, much like HTML is a way to structure for a web browser.

- Q. Now, on some of the previous slides we looked at Groupon architecture. Does that apply to both the desktop versions of Groupon's certain versions and mobile versions as well?
- 16 A. Yes, that's correct.

- Q. Now, looking at slide 102. What portion of the claim element are you dealing with here?
- A. Now we're dealing with the middle portion, the beginning of the middle portion highlighted in yellow which says: in accordance with the characterizations established for the respective reception system users.
- Q. And what does this PX-713 document say about that portion of the claim element?
- 25 A. So that is again coming from this internal document

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describing the Feynman project at Groupon. And whereas before we were focusing sort of on the input part, how we compile data and how we establish characterizations, this part is focusing on the output part of the relevance service. And so as you can see here, I kind of expanded it out a little so it's easier to read.

On the right-hand side, it shows that the output of this service are essentially deals and categories and concepts. And you can see the text description from the document says: output is a list of scored/ranked items, as well as meta-items, such as categories and tags.

So what is happening here is the information has been collected and compiled and used to establish characterizations. It is then determining or it's basically enabling the ads to be supplied to and retrieved in accordance with these characterizations, what would be of interest to the user.

- Q. So looking on slide 103. Did you find any testimony to support your opinion about this part of the Element C?
- A. Yes. So Aileen Sandridge, which is the VP of Engineering was asked the question: So Groupon determines what deals to show to a user based on -- and then there is a bunch of things and I want to draw your specific attention to -- based on the user's gender, location, purchase history, and recency of purchase, correct?

1 And she answers: Correct.

So user's gender, user's location, user's purchase history, the recency of purchase. Those are all examples of these characterizations that have been established by Groupon with respect to requests to users that using their apps.

- Q. So looking on slide 104. What part of the claim element are you addressing here?
- A. We're getting close to the end now of this claim element, and this part is the "supplying advertising data to the reception system."
- Q. And looking at what you show here with PX-964, 965, 967 and 970. What are you showing about this claim language?
- A. So this is essentially a recap of the things we talked about before. So I'm showing how Groupon's service for their website, for the desktop and laptop website are sending back advertising data such as the pizza ad, pizza image we have seen before. That is data for an advertisement in PX-965. And that is going to end up being eventually displayed in the web browser in PX-9634.

And likewise for the mobile apps version, they're also downloading advertising data such as the picture of an iPhone, and I think it's an iPad shown in 970.

And that is then being used to be displayed in the mobile

1 apps version for the iPhone.

- Q. And now on slide 105. What are you showing here about the "storing predetermined amount of advertising data?"
- A. So we're now at the very end of the final claim element here. And this is the part highlighted in yellow that says "storing a predetermined amount of advertising data in a store established at the respective reception systems."
 - Q. And on slide 105, I see you are referring back to the cache control parameters again.
 - A. Yes, that is correct. So what is happening here is that Groupon is sending the cache control header to the Groupon server saying the cache control header for all of the HTTP responses that are sent to the users. And what they send in those cache control headers will then determine what amount of advertising data is stored.

So for example, for both the mobile apps as well as for the desktop and laptop website, if there was a goods page that had say 38 image advertisements in it and Groupon set those advertising cache headers to be greater than zero, then that would store all 38 of them in a stored predetermined amount which is the amount of images for advertising that were in that page originally.

THE COURT: All right. I'm sorry to interrupt.

1 I'm going to need to take a short recess. We'll take a 2 short break. Take the jury out, please. 3 (Jury left courtroom.) THE COURT: I think this will just be a few 4 5 We will be in recess. members. 6 (Brief recess taken.) 7 8 (Proceedings reconvened after recess.) 9 THE COURT: Bring the jury back in. 10 (Jury entering the courtroom at 4:12 p.m.) Welcome back. We will continue. 11 THE COURT: 12 MR. OUSSAYEF: Thank you, Your Honor. BY MR. OUSSAYEF: 13 14 Dr. Schmidt, I would like to resume with the last 0. part of the last element of claim 8. 15 16 Okay. 17 So looking on slide 105, can you tell us what's going 18 on at the bottom of this slide here with the mobile 19 applications? 20 Yes. So as with the desktop/laptop version of the 21 Groupon's website, the mobile applications version also uses 22 the cache control headers for the HTTP responses that it 23 sends to users, thereby storing a predetermined amount of 24 the advertising data and it's being stored here in the local 25 store of the cache that we talked about this on local

1 device.

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- Q. Looking on slide 106, is it your opinion that Groupon
 performs the structuring advertising element of claim 8?
 - A. Yes, that's correct.
- Q. So to conclude, is it your opinion that Groupon
 performs every element of claim 8 of the '849 patent?
- 7 A. Yes, it is.
- Q. So now let's move on to the '967. Can you remind us of your opinions with regard to the '967 patent?
- A. So my opinions are that Groupon infringes claims 1 and claims 2 of -- claim 1 and claim 2 of the '967 patent.
- 12 Q. Let's look at claim 1 of the '967 patent. And have
 13 you broken this down into colors like we saw before in slide
 14 109?
- 15 A. Yes, that's correct.

I split it into two parts.

- Q. Now, I notice that element 1A is broken up into two colors. Can you tell us why you did that?
- A. Sure. As you can see, it's a very long claim element consisting of about eight lines, so just to keep it manageable and fit on to the screen when we talk about this,
- Q. Let's address the preamble or the first part of the
- '967 patent. If we look on slide 111, did the Court
- construe any parts of this claim element?
- 25 A. Yes, there are several parts that are construed. We

seen these before, applications, computer network, the network.

- Q. And then looking on 112, here I see you're again comparing the first part of two different claims. Can you tell us what we're seeing here with the '849 patent on the left and the '967 patent on the right?
- A. So, if you recall, we just got done discussing the '849 patent and you look at the claim 1 preamble for the '967 patent and you'll see that it's very similar. So the '849 patent is about advertising, the '967 patent is about interactive application, but they're going to be presented over a computer network and so on. The key point from this slide is the '967 patent shares many elements with the preamble of claim 1 of the '849 patent.
- Q. And are we going to discuss the interactive applications as we walk through the '967 patent?
- A. Yes, we will.

- Q. And now on slide 113, what are you showing here with the Groupon servers and various arrows?
 - A. So this is sort of reiterated what we talked about before when we talked about the '967, the '849 patent, this is showing how Groupon's servers present interactive applications on a computer network and the network includes a multiplicity of user reception systems, so we're basically showing with Exhibit 964 there could be multiple desktop

instances, multiple laptop instances, this is a multiplicity of end use reception systems connected over the network.

- Q. Looking on slide 114, is it your opinion that Groupon performs the preamble of claim 1 of the '967 patent?
- A. Yes, that's correct.

- Q. Let's go on to 1A here. So did the Court construe here on slide 116 any claim terms in the generating a screen display part of the '967 patent?
- A. Yes, it did. And as you can see, these are terms that have already discussed in the context of the '849 applications, objects and partition, and they have the same structure or definition here as well as they did in the '849.
 - Q. Looking on slide 117, what part of the claim element are you addressing here?
 - A. Here we're talking about the first part of claim element 1A highlighted in yellow which is generating a screen display at a speculative reception system for a requested application.
 - Q. What do we see here on PX 964 and PTX 965 in this slide?
 - A. So we're showing a application, this is the local deals application that has been requested and we're showing a generated screen display on the user's computer, on the reception system.

Schmidt - direct

Q. If we look on slide 118, what part of the claim element are you dealing with here?

- A. Now we're dealing with the second part which I highlighted in yellow and this part says the screen display being generated by the speculative reception system from data objects having a prescribed data structure.
- Q. And what are you showing on slide 118 with the orange highlighting over some of the parts of the page?
- A. So the orange highlighting are examples of data objects, you can see the little shopping cart icon, you can see, it's a little hard to see, but it is a yellow rectangle around the pizza advertisement that's in the middle. This is showing PX 964 and PX 965 that is showing the Groupon screen displays being generated from these data objects that I'm showing you here.
- Q. Looking at slide 119, did you -- I believe we have seen PX 180, but what are you showing here on slide 119?
- A. So PX 180 was the HTTP spec, the Hypertext

 Transferring Protocol which defined that data structure for
 a HTTP response. And what we're showing here is how that
 information is sent back for one of the objects that's used
 to generate the screen display, in this particular case it's
 the shopping cart icon object so that's what's in the
 message body and you can see that that's a part of the data
 structure, you can see the response, header part which has

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the cache control settings and the content link and so on as well as the status line which says it was downloaded successfully. That's just showing the various parts of the data structure.

- Q. Then on slide 120, what part of that claim language are you addressing here?
- A. This is the part having to do with at least some of the -- some of which objects may be stored at the reception system.
 - Q. And on slide 120, do you give an example of something that can be stored on the reception system?
 - A. So sort of following on with our example of the shopping cart icon, what I'm showing here is that the font file that this appears in is going to have its cache control header set by the code shown in PX 1412 and PX 1413, and this will then be used, sent back to the HTTP response and used by the reception system to store the object in the local store.
 - Q. And this is similar to what we were talking about for the '849 patent?
 - A. That's right. That was talking about storing advertising, now we're talking about storing application fonts.
 - Q. Now looking at slide 121, what part of the claim element are you addressing here?

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A. This is the last part of claim element 1A. This is the screen including a plurality of partitions.

- Q. And now on slide 121, we see again PX 964 on the left and 965 on the right with a different color boxes, can you tell us what you were showing there, Dr. Schmidt?
- A. Sure. So what we're showing here on the left are two different partitions, one is shown in red, that's a kind of the part that's around the outer part, minus the browser address bar at the top, and then I'm also showing a blue part which is inside of that, it's the part that has a bunch of command functions in it such as local, goods, getaways, coupons and so on, you can see that is part of the blue partition or the blue area I'm outlining in blue.
- Q. And then on the right side, what are you showing with the computer language?
- A. So the right side is showing the divs in the HTML code. Remember the divs are the formatting elements that are being used in HTML that Groupon sets, these are used essentially to display those or to direct a way in which the partitions will be displayed. So the outer div which is the one in red, that's the global container div, and then the inner div which is in blue, outlined in blue, is something that's the header dash V 2 div and that's the div that essentially describes how those command functions will be displayed in the blue box we see on the left-hand side.

Q. Dr. Schmidt, is it your opinion that Groupon performs the generating a screen display element of claim 1 of the '967 patent?

A. Yes, that's correct.

- Q. Let's go on to the second part of element 1A. So looking on slide 124 here, did the Court construe any part of this portion of the element, if you will?
 - A. Yes, there are several parts that are construed, some we have seen before, objects, partition, application, there is a new claim term that we'll talk about, we'll talk about it when we get to the other slides that are coming up in a moment.
- Q. On slide 125, what part of this part of the element are you addressing here, Dr. Schmidt?
 - A. This part of the element is the partitions being constructed from objects.
 - Q. And what objects are you referring to here on slide 125?
 - A. So what I'm showing here, this is from exhibit PX 964 and Exhibit 965, I'm showing the two partitions identified earlier, the red part and the blue part, and then I'm showing how the red part and the blue part are constructed out of objects such as advertising data which is what you see in the gold box, with the pizza, there is also advertising data which we see with the massage and facials,

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you can't quite see it because it's hidden by the blue and red lines, the shopping cart icon that's in that gold box at the top.

- Q. Looking at slide 126, this is the long-term that we were referring to earlier. Can you remind us of the Court's construction here on slide 126 here?
- A. Sure. The long-term starts with the objects being retrieved has been construed by the Court to mean the objects being retrieved from the objects stored at the respective reception system or if the current version of the objects are not present from the object stores at the respective reception system then from the network.
- Q. Let's talk about both those parts one at a time. So on the left, let's talk about the situation where objects are retrieved from the network. Can you explain how that happens?
- A. Sure. So it turns out that we don't already have the local store containing the objects we're looking for, either downloaded or stale or whatever, in that particular case, then the reception system will go out to the network and go to Groupon 's server, servers, and then download the appropriate object that it needs. In this case perhaps it would be downloading the shopping cart, now you can see that the shopping cart is there on the screen, it's easier to see it in this case although it's still rather small. This is

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showing the case where we're getting the object from the network.

- Q. How about the situation where you retrieve the objects from stored objects, what's going on there.
- A. If we've already stored the objects, they're cache locally because they have been accessed before, in that particular case when the partition is constructed rather than having to go out to the server it can simply go look at the local store in the cache and retrieve the object from there, so that bypasses that long delay going out across the network to download the image, download the object.
 - Q. And you're referring to PX 965 there, if you tell us what that showed?
 - A. So PX 965 is showing a HTTP response which is in the context of PX 964 which is the interaction that that web browser is using with the objects for the application.
 - Q. So now looking at slide 127, what part of the claim element are you addressing here?
 - A. This part is the final part of this claim element which is highlighted in yellow, and it says such that at least some of the objects may be used in more than one application.
- Q. Now, you're showing the shopping cart here. Can you explain what you're showing here?
- 25 A. So the shopping cart icon is an example of an object

that's downloaded from the network and/or retrieved from the local store and you can see how the same shopping cart icon appears both in the local application as well as in the goods application.

- Q. Now, the claim language says at least some of the objects may be used in more than one application. Do they actually have to be used in more than one application?
- A. They don't have to be used, they may be used.
 - Q. In your opinion looking at slide 128, it's your opinion that Groupon performs this second part of element 1A?
- A. Yes, that's correct.

- Q. So let's talk about the generating element of claim 1 of the '967 patent. On slide 130 here, did the Court construe any part of this element?
 - A. Yes, there is a couple of constructions that may look familiar like applications and partitions and there is a new claim term, a first partition for presenting applications, that has a new construction that we'll talk about.
 - Q. Now, looking at slide 131, first of all, how did the Court construe this part of the claim element?
 - A. So the phrase generating at least a first partition for presenting applications has been given a formal definition by the Court of generating at least a first area for presenting applications.

Q. Can you show us what you're demonstrating here on slide 131?

- A. Yes. So this is kind of the human language view, the human centric view of a first area that's been generated from HTML, we'll look at that in the next slide, and this is essentially the first area that's used for presenting applications.
- Q. Now, looking at slide 132, what do we see here in the computer language?
- A. Now we're actually seeing how that area is generated, and the area is generated from the HTML code, the right-hand side, remember this is the code that's downloaded from Groupon and the servers, this is what includes those divs, this is the so-called global container div, this is the one that formats the application area that's used to present the applications. So what we're showing on the right-hand is the HTML code is then used to generate the first area for presenting applications which is shown on the left-hand side from a human point of view.
- Q. Is it your opinion that Groupon performs the generating at least a first partition for presenting applications element of claim 1 of the '967 patent?
- A. Yes.

Q. So let's go to the last element here, generating concurrently. So did the Court construe any part of this

1 | element on slide 135?

- A. Yes. So we'll see some we have already seen before, partition, application, there is two new claim terms, one is command functions and the other is a second partition for presenting a plurality of command function, we'll talk about both of those.
- Q. Looking on slide 136, what part of this claim element are you addressing here?
 - A. So here I'm addressing the first part of element 1C, which is generating concurrently with the first partition at least a second partition for presenting a plurality of command functions.
- Q. How has the Court construed that part of the claim element?
 - A. That's been construed as generating concurrently with the first partition at least a second area for presenting a plurality of command functions.
 - Q. What are we seeing here in PX 964 with the blue and red box?
 - A. So this is showing how the second area appears, the second area is the part with the various command functions like local goods, we're showing how that relates to -- that's the part in blue, and how that relates to the first area which is shown in red.
 - Q. So we haven't yet talked about command functions.

Tell us what you're seeing on slide 137?

A. So these are the command functions that Groupon is going to generate or present in the second area, so these are the command functions we'll talk more about what they do in a second, but some of the things they do is allow you to select different applications.

THE COURT: I'm afraid we're going to have to wait to hear more about that tomorrow since it's now 4:30.

Ladies and gentlemen of the jury, we will let you go for the day. Tomorrow is a shorter day, just 9:00 until 1:00 p.m., so we won't be providing you lunch. We'll take at least one break, if need be we'll take a couple of breaks, but otherwise the day will look a lot like today. While you are away from us, no talking about the case, no research or reading anything related to the case, and be here in time to start at nine o'clock. Have a good evening. Thank you all.

(Jury exited the courtroom.)

THE COURT: Dr. Schmidt, you may step down. The rest of you can have a seat if you want. I'm going to give you my ruling on the deposition objections that were argued earlier today. They're also the subject of a letter that was submitted yesterday, DI 370.

So I'm going to largely go through them by witness. If you have any questions, let me know at the end.

With respect to witness Varun Sood, first I have IBM's objection to Groupon's counterdesignations. They were counterdesignations that range from pages 11 to 120 of the deposition transcript. This is what is addressed at page 1 of the letter.

IBM's objections are overruled. All of
Groupon's counterdesignations were identified either by
Groupon or IBM as either designations or counterdesignations
in the pretrial order.

All of Groupon's counterdesignations are appropriate for completeness and, in fact, without them, some of what IBM has now reduced its designations to would be incomplete and risk being misleading.

I recognize there is some limited prejudice to IBM from this ruling since the parties had gone to the trouble of associating specific counterdesignations with specific designations. But I can and here will alleviate that prejudice by allowing now both parties to revisit their designations and counterdesignations for all of the witnesses to which this objection applies. You need to get that done, including referring or conferring on any objections you may have to revised designations or counterdesignations no later than midnight tonight. Stop conferring no later than midnight tonight.

If there remain disputes, when you get here at

8:30 tomorrow morning, we'll take them up then. But that is more generally on that whole issue of the counterdesignations. Turning next to IBM's objections to Groupon's counterdesignations at pages 115 and 116 of witness Sood. This is discussed at page 2 of the letter. longer because I am not going to allow certain IBM testimony that Groupon objects to. I'll get to that momentarily. Sood. We are now on page 2 of the letter.

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my ruling with respect to specifically Varun Sood and then

This objection of IBM's is sustained. This goes to testimony about whether a lawyer read the patent and subject of one of the motions in limine, and also I'm not sure Groupon is actually really offering his testimony any

Next is IBM's objection to Groupon's counterdesignations at pages 11 to 114, again, of Varun

These IBM objections are overruled for the reasons I have already given. They're appropriate for completeness and clarification.

That takes me to witness Aileen Sandridge. IBM's objections to Groupon's counterdesignations at pages 114 to 242 of the transcript. That is page 2 of the letter.

Those objections are overruled for the same reasons that I have given previously.

It's the same with respect to IBM's objections

to Jan Krems.

Groupon's counterdesignations at page 164 to 216 of the transcript. That is page 3 of the letter. Again, IBM's objections to the counters are overruled for the same reasons I have already given.

IBM's objections to Groupon's counterdesignation of the Jan Krem's testimony at page 242. We're now at page 3 of the letter.

This objection is sustained. I agree with IBM that the testimony would be improper lay witness testimony. I would also add it is not clear to me that Groupon is actually any longer seeking to play at page 242 since I'm not going to allow IBM to do some of what was disputed.

Finally, at least on IBM's objection, witness

Damien Schmitz. IBM's objection to Groupon

counterdesignations at pages 110, 111. We're now at pages 3

and 4 of the letter.

Those objections are overruled for the same reasons as above.

Then there was this one excerpt I think at page 111 where somebody only wanted to give part of the answer.

You do need to give all of the answer. I assume that that may have been an oversight.

So that is IBM's objections.

Groupon's objections.

First, Category A, it was with respect to witnesses Sood, Sandridge, and Schmitz. Pages 4 to 5 of the letter.

These objections are sustained. I agree with Groupon that the testimony IBM has designated here is not relevant. It would be unfairly prejudicial for reasons discussed in Groupon's portions of the letter as well as in Court earlier today.

With respect to Groupon's objections that are labeled the letters B, the letter D and the letter E. So B, D and E. This relates to witnesses Sood, Sandridge, and Schmitz discussed at pages 5 to 6 of the letter.

Groupon's objections are sustained. I agree with Groupon that the testimony IBM designated there would in this context be misleading and unfairly prejudicial.

I had skipped over but now turn to objections at letter C, C as Cat.

There, Groupon's objections are overruled. This is the testimony that goes to witnesses for Groupon that have given answers about IBM's reputation. I do agree that that is relevant. I don't think it is highly relevant but I do think it is minimally relevant, and I don't think 403 causes the balance to lead to it being excluded.

Specifically, I believe it's witness Sood at page 120 and witness Sandridge at page 263.

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So that should be the rulings on all of what was disputed now. I have to say I have looked at that letter many, many times and tried to articulate my reasoning. probably the most confusing format I have seen. So we have I think from our most recent trial, the Integra trial, an example of how it was done in chart format which I think will it make it easier for you. Certainly it will make it easier for me. If you can stick around for a minute after I leave the bench, we have copies for you. And to the extent there are objections going forward to depositions, if you could follow that format, I think we will all find it a lot easier. All right. Any questions about that or any other issues from IBM, before we break? MR. OUSSAYEF: No, Your Honor. Thank you. THE COURT: Okay. And from Groupon? MS. SHAMILOV: I have is a question, Your Honor about the first. Early on you mentioned instructions to meet and confer about additional, you know, designations, counters, and I wasn't sure I understood that to be just with respect to the testimony that the parties were actually

THE COURT: So it's just for these four witnesses.

going to play or across the board. It's midnight.

1	MS. SHAMILOV: Okay.
2	THE COURT: I think it was four. However many.
3	MS. SHAMILOV: Got it.
4	THE COURT: It may only be three. It's however
5	many of the IBM objections that you all counterdesignated
6	improperly because you hadn't timely disclosed
7	counterdesignations. On that objection, on that issue, to
8	alleviate the prejudice to IBM, I'm giving them another
9	chance to go back and say now we want to add back some
10	things. And if there are issues on that, you need to work
11	that out by midnight or sleep on it and come see me in the
12	morning. Okay?
13	MS. SHAMILOV: Yes. Thank you.
14	THE COURT: Is there anything else or other
15	issues from Groupon? No?
16	MR. HADDEN: No, Your Honor.
17	THE COURT: Okay. Then we'll look for you at
18	8:30 tomorrow morning. Have a good evening.
19	(Proceedings end at 4:41 p.m.)
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21	I hereby certify the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.
22	
23	<u>/s/ Brian P. Gaffigan</u> Official Court Reporter
24	U.S. District Court